

TRANSACTIONS

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EAST LoTHIAN ANTIQUARIAN AND FIELD NATURALISTS' SOCIETY

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CONTENTS.

	PAGE
BUTTERFLIES AND MOTHS FOUND IN EAST LOTHIAN	
By ALICE BLANCHE BALFOUR	169
YESTER AND ITS GOBLIN HA'	
By JOHN RUSSELL	185
HISTORICAL NOTES OF PLACES VISITED BY THE	
SOCIETY:—	131
PARISH CHURCH OF WHITEKIRK	131
NUNRAW	204
PRESTON	207
TANTALLON	212
DIRLETON	215
CONVENT OF CARMELITE FRIARS AT LUFFNESS	217
HAILES CASTLE	218
TYNINGHAME	220
WINTON HOUSE	222
PENKAET CASTLE	223
LONGCROFT FORT	226
OFFICE-BEARERS, 1928-29	229
FIFTH ANNUAL REPORT, 1928-29	231
STATEMENT OF ACCOUNTS ENDING 21st MAY 1929	233
LIST OF MEMBERS FOR 1929	235
INDEX	241

BUTTERFLIES AND MOTHS FOUND IN EAST LOTHIAN.

A mere catalogue of insects must of necessity be very dull reading for everyone who has no special knowledge or interest in them, but I hope that not a few members of the East Lothian Antiquarian and Field Naturalists' Society are interested in this branch of natural history and will find the following notes, as well as names, worth looking at. This County has advantages in having large heather-clad hill areas, woods, and cultivated lands, besides the links and other wilder districts close to the sea, all of which have a more or less distinctive *fauna*. It is too far north to have the wealth of insects found in the south of England, and the same may be said to a lesser extent as regards the west of our island. No doubt cultivation, and (unfortunately) golf, have exterminated many species. Climate seems also to have affected the range of some, but this is somewhat puzzling, and requires more investigation than, so far as I know, it has received. One of the most remarkable facts in distribution of British species of insects is their migration from the Continent, but it does not occur so much here as further south. I have, however, come across two marked instances of it in this County to which I shall recur later. "Mimicry," "protective resemblances," and "warning colours and shapes" are subjects very much studied by naturalists at present. The actual mimicry, for instance, of one species of butterfly or another is in many tropical countries almost unbelievable, but there are no cases of it in East Lothian. On the other hand, the more one studies the subject, the more wonderful are the cases of "protective resemblances" and "warning colours" which come before one, and I propose to mention a few of the more obvious of these in notes to certain species.

I have arranged the *lepidoptera* (butterflies and moths) according to the printed list of Mr South. I understand that his arrangement is not now generally accepted, but I have adhered to it, partly because, being printed for labelling in cabinets, it is very convenient to use, and partly because I am not aware that any one else's classification is absolutely accepted.

My collection of East Lothian *Lepidoptera* was begun by some of my brothers and myself when we were children. Two other collections were being made in the neighbourhood at the same time, though I then only knew of one of them. William Nisbet, living at the Lint Mill, between Stenton and East Linton, was one of the collectors. He was a remarkably intelligent man. He would now be called a small-holder, and was a daguerreotypist, afterwards a photographer, a carver in wood, and a violin-maker. He was a delightful friend to us children. From him I first learnt anything about collecting and setting insects, but he himself was practically self-taught, and had no books or any means of getting much information or apparatus.

The other collector was Mr Thomas Marjoribanks, son of the then minister at Stenton, and himself afterwards minister of Garvald and of Prestonkirk. He collected in other districts and counties, and, unfortunately (as was only too often the case in those days), did not keep his collections separate, and did not label his specimens. Still more unfortunately, neither he nor Willie Nisbet took sufficient care of their collections; so that mites and clothes moths got in and to a large extent destroyed them. Perceiving this to be happening, I made repeated efforts to obtain them from their owners without success, and it was only when it became obvious that they were getting utterly destroyed that they consented to let me have the remains. I was able to save a good few, which are now incorporated with my own collection. There were some, however, in Mr Marjoribanks's collection that seemed to me perhaps doubtful East Lothian specimens, and where I have retained them in my list I have put a query.

There were two other collectors in the County earlier in date, whose names are known to lepidopterists, but regarding whom I have hardly any information, namely, Dr Nelson of Pitcox and Mr Archibald Hepburn at Whittingehame Mains. I do not know what became of their collections, nor do I know whether, if they are still in existence, there is any reliable record in them as to when or where the insects were obtained. The one or two notes about their collections which I have obtained I have added to my list.

One more naturalist I must mention, as I think he did more on these lines than anyone else that I know of in this district, namely, the late Mr W. Evans. He gave me great assistance and much information, and I am greatly indebted to him for all he did for me. Without his help my list would have been much less complete.

That it is far from complete even now I am fully aware. For about forty years I hardly collected at all, and it was owing to the late Professor Raphael Meldola—a celebrated scientific chemist, a Fellow of the Royal Society, and an ardent collector in his leisure time—having come to East Linton for his holiday in 1910 that I began to collect again with him, and considerably added to my list. Even so, having other things to attend to, and having to be largely away from Scotland at the best collecting times of the year, I have left much ground almost untouched. I should be most grateful to any one, who reads this, who can give me any information as to uncatalogued species, their locality, their habits, with dates, etc., if he will do so. If information is given me regarding rarer species, I would keep it strictly private, as it is essential that care should be taken to prevent collectors from exterminating them, as has already happened in too many cases elsewhere.

There may be some mistakes in naming some of my specimens, but, as I have been helped by several "specialists" in this, I hope there are very few. The late Mr Durrant of the British Museum, Mr Prout, London, Professor Waters, Oxford, have been especially kind in regard to this, and to them I owe the warmest gratitude. Professor Poulton, F.R.S., Oxford, has also been more than kind and suggestive on various points on which he permitted me to consult him, and was kind enough, in spite of the large amount of his work, to look through and correct this paper.

RHOPALOCERA (Butterflies.)

- PIERIS BRASSICÆ, *L.* (Large garden white).
 P. RAPAE, *L.* (Small garden white).
 P. NAPI, *L.* (Greenveined white).
 EUCLOE CARDAMINES, *L.*—Two caught by W. Evans, Tynefield, May 1860 and 1861.
 COLLAS EDUSA, *Fb.*—One specimen (var. *Helice* *Hb.*) caught near Longniddry 1919, by J. G. W. Hill.
 ARGYNNIS SELENE, *Schiff.*—Caught by Archibald Hepburn of Whittingehame Maine, 1845.
 A. AGLAIA, *L.*
 VANESSA POLYCHLORAS, *L.*—One seen by W. Evans at Tynninghame, not caught.
 V. URTICÆ, *L.*—I have one aberration in which the hind wings are wholly dark brown, instead of having a bar of red and yellow.
 V. IO, *L.* (Peacock).
 V. ATALANTA, *L.*
 V. CARDUI, *L.*
 The chrysalis or pupa of these butterflies of the genus *Vanessa* (as well as those of the genus *Pieris* above) have been proved to possess the power of adapting themselves to the colours of their surroundings, the susceptibility being present while the pupa is maturing in the caterpillar before it sheds its last skin. The *Vanessa* pupæ often have spots of a metallic-looking gold colour on them.
 PARARGE EGERIA, *L.*
 SATYRUS SEMELE, *L.*
 EPINEPHILE JANIRA, *L.*
 E. HYPERANTHUS, *L.*
 CENONYMPHA TYPHON, *Rott* = *DAVUS* *Fb.*—Two specimens caught by W. Nisbet, 1865 or 1866, but not now existent.
 C. PAMPHILUS, *L.*
 POLYOMMATUS PHLOEAS, *L.*
 LYCENA ASTRARCHE, *Bgstr.* = *ARTAXERES*, *Fb.*—This small brown butterfly used to be found in large numbers on Arthur's Seat, Midlothian, but has been exterminated there by greedy collectors. It is still found in other places, but the food plant is not a common one. It has been found by the late W. Evans in East Lothian.
 L. ICARUS, *Rott.* = *ALEXIS*, *Hb. D.L.*
 My impression is that some butterflies are rarer in East Lothian than they used to be

sixty or seventy years ago, such as *Argynnis aglata*, *Vanessa io* (the Peacock), *Pararge aegeria*, and *Satyrus semele*. *Vanessa cardui* (the Painted Lady) is always irregular in its appearance. The occurrence of isolated specimens of other species I have noted in the list.

HETEROCERA. (Moths.)

- ACHERONTIA ATROPOS, *L.* (Death's Head Hawk Moth.)
 SPHINX CONVULSUS, *L.*
 DEILEPHILA GALII, *Schiff.*
 D. LIVORNICA, *Exp.*
 CHGROCAMPA CELERIO, *L.*
 C. PORCELLUS, *L.*
 SMERINTHUS POPULI, *L.*
 MACROGLOSSA STELLATARUM, *L.* (Humming bird hawk moth.)
 The last eight species are commonly called "Hawk moths," and are conspicuous for their large size and powerful rapid flight, quite unlike most butterflies and moths. Several of them—*S. convulsus*, *D. galii*, *D. livornica*, and *C. celerio*—are usually migrants from the Continent, and rarely, if ever, breed in this country, but I believe that *A. atropos* and *S. populi* breed occasionally in East Lothian. I only know of one specimen each of *D. galii* and *D. livornica*, and both these are in my collection. *C. celerio* is in Mr W. Evans' list as having been found in this county, but I know of no particulars. *M. stellatarum* is very irregular in its appearances, but is sometimes common when it does appear.
 TROCHILUM CRABRONIFORMIS, *Lewin.*—Empty pupa cases found by W. Evans at Luffness.
 SESIA MYOPIFORMIS, *Borkh.*—Larva recorded by W. Evans in Tynninghame Garden.
 ZYGENA FILIPENDULÆ, *L.*—Recorded by W. Evans.
 SAROTHRIPUS UNDULANUS, *Hb.* = *REVAYANA*, *Sc.*—I only know of one specimen.
 HYLOPHILA PRASINANA, *L.*—W. Nisbet one. The male moth makes "a peculiar stridulatory noise when flying."
 NUDARIA MUNDANA, *L.*
 SETINA IRRORELLA, *Clerck.*—W. Evans writes—"Supposed larva only."
 GNOPHRIA RUBRICOLLIS, *L.*—Said to have been caught by Dr Nelson at Tynninghame.

EUCHELIA JACOBEE, L. (Cinnabar Moth). —

This insect is the most remarkable instance of "warning coloration" that I know of in this county. The imago (bright crimson and dark blackish green) and the larva (transversely striped black and yellow) are both extremely conspicuous. The striped black and yellow of this caterpillar and of the pupa of *A. grossulariata* (see p. 77), appear to be examples of what is called "Müllerian resemblance to the wasp pattern." Certainly the resemblance to common wasps is very marked and must be a great protection. The moth flits about very lazily, obviously in no fear of enemies, and can be almost caught by the hand. The caterpillar, unlike most, makes no attempt at concealment, and in places where it is common may be seen feeding on the leaves and flowers of ragwort (*Senecio vulgaris*) by the hundred, reducing the plants to mere sticks. It has been ascertained by experiment that they have a very nasty taste, and, consequently, are avoided by birds and other enemies. They probably have some insect enemy (such as Ichneumon flies), not affected by taste; else they might increase and become almost a plague.

It is interesting to find that what might be a pest here is being used as a remedy in New Zealand. The ragwort plant, on which the Cinnabar Moth caterpillar feeds, has been, unfortunately, introduced into Australia and New Zealand, and has itself become a plague from the abundance and vigour of its growth. In parts of Australia it grows to the size of trees, and has made some valleys uninhabitable. It was suggested that the introduction of the moth might destroy the plant, but the danger to be apprehended from that was that its larvae might prefer to feed on some other and valuable plant, and destroy that instead of ragwort, thus providing two pests, instead of one. Experiments have now been made by the biological section of the Cawthron Institute at Nelson, New Zealand, to see if the caterpillars would eat anything besides ragwort, but even when starving they refused all else. The tests having proved satisfactory, the Institute Authorities considered it safe to introduce the caterpillars, and in February 1923 permission was asked of the

Government to send them to the badly-infested districts.

NEMEOPHILA PLANTAGINIS, L.

ARCTIA CAJA, L. (Tiger moth.)

SPILLOSOMA FULIGINOSA, L.

S. LUBRICIPEDA, Esp.—Larvae recorded by W. Evans in gardens at Aberlady.

S. MENTHASTRI, Esp.

HEPIALUS HUMULI, L. (Ghost moth).—The large white: male hovers up and down in a peculiar way over meadows at dusk. In "Lauder and Lauderdale" by A. Thomson, the writers of the section on Entomology state that "The black-headed gull feeds on nothing else for weeks but the *humuli*."

H. SYLVANUS, L.

H. VELLIDA, Hb.

H. LUPULINUS, L.

H. RECTUS, L.

COSSUS LIGNIPERDA, Fb. — Recorded by W. Evans.

ORGYIA ANTIQUA, L.

POECILOCAMPA POPULI, L.

BOMBYX RUBI, L.—The large handsome black-and brown hairy caterpillar is common on the Lammermuir Hills in autumn. The male flies wildly over the heather in bright sunshine in June.

SATURNIA PAVONIA, L. (The Emperor Moth). Also frequent on the hills. The larva, emerald green with black velvety transverse stripes dotted pink, is the most beautiful caterpillar I know.

DREPANA LACERTINARIA, L.

D. FALCATA, L.—Two in T. Marjoribanks' collection.

DICRANURA VINULA, L. (Puss moth.)

The larva of this moth secretes a fluid-formic acid — with which, when about to pupate, it smears the inside of its silken cocoon, which is thus transformed from a fibrous to a hard gelatinous material. The perfect insect, on having left the pupa case, emits another fluid, which softens the hard cocoon and enables the moth to emerge. This fluid is *alkaline* (potassium hydroxide). Thus the insect produces two opposite strong chemical solvents, having lain absolutely quiescent and immovable during the whole of the intervening months. The formic acid is expelled from a slit-like opening in the prothorax below the head when the caterpillar is irritated. It can be shot out a distance of

several inches, and is most painful if it enters the eye, as Professor Poulton tells me happened once to him.

PTEROSTOMA PALPINA, *L.*—One in T. Marjoribanks' collection.

LOPHOPTERYX CAMELINA, *L.*

NOTODONTA DIOTEA, *L.*, *Esp.*

N. DROMEDARIUS, *L.*—Recorded by W. Evans. One was caught at Barness Lighthouse in 1913.

PHALERA BUCEPHALA, *L.*

THYATRA BATIS, *L.*—A moth with pink spots on wings, like peach flower petals.

CYMATOPHORA OR *Fb.*—Recorded by W. Evans.

ASPHALIA FLAVICORNIS, *L.*

NOCTUÆ.

BRYOPHILA FERLA, *Fb.*

DEMIS CORYLI, *L.*

ACRONYCTA TRIDENS, *Schiff.*—Recorded by W. Evans.

A. PSI.

A. BUMIGIS.

LEUCANIA CONIGERA, *Fb.*

L. LITHARGYREA, *Esp.*

L. COMMA, *L.*

L. IMPURA, *Hb.*

L. PALLENS, *L.*

These five species of *Leucania* are all common in July and August, *L. pallens* being very abundant. They are all of a general buff colour, *L. pallens* being paler and with less pattern than the others. They are very conspicuous flying at night. Presumably this is a warning colour, and that they are rather distasteful, as, in recent experiments both in East Lothian and various places in England, it has been found that the common long-eared bat rarely touches them, whereas many less common species are eaten freely. (See later, *Triphana pronuba*.)

TAPINOSTOLA FULVA, *Hb.*

CALAMIA LUTOSA, *Hb.*—One recorded by W. Evans at Bass Rock Lighthouse, 1908.

GORTYNA OCHRACEA, *Hb.*

HYDROECIA NICTITANS, *Borck.*—One specimen caught with two yellow spots on fore wings.

H. PETASITIS, *Dble.*—The food plant is "Butterburr," so common by all our burns, and it seems strange, therefore, that the insect is apparently rare.

H. MICACEA, *Esp.*

AXYLIA PUTRIS, *L.*—Larva recorded by W. Evans.

XYLOPHASIA BUREA, *Fb.*

X. LITHOXYLEA, *Fb.*

X. MONOGLYPHA, *Hufn.* = *POLYODON*, *L.*—A very common moth, much eaten by bats.

NEURONIA POPULARIS, *Fb.*

CHARIS GRAMINIS, *L.*—Sometimes in such quantities as to be very destructive to grasses.

CERIGO MATURA, *Hufn.*

LUPERINA TESTACEA, *Hb.*

L. OESPITIS, *Fb.*

MAMESTRA FURVA, *Hb.*

M. BRASSICÆ, *L.*—Very destructive to garden cabbages.

APAMEA BASILINEA, *Fb.*

A. GEMINA, *Hb.*

A. UNANIMIS, *Tr.*

A. DIDYMA, *Esp.* = *OCULEA*, *Gn.*

MIANA STRIGILIS, *Clerck.*

M. FASCIUNCULA, *Haw.*

M. LITEROSA, *Haw.*

M. BICOLORIA, *Vill.* = *FURUNCULA*, *Tr.*

M. ARCTUOSA, *Haw.*

CELENA HAWORTHII, *Curt.*

CARADRINA MORPHEUS, *Hufn.*

C. FARAXACI, *Hb.* = *BLANDA*, *Tr.*

C. QUADRIFUNCTATA, *Fb.* = *CUBICULARIS*, *Borck.*

RUSINA TENEBROSA, *Hb.*

AGROTIS VESTIGIALIS, *Hufn.* = *VALLIGERA*, *Hb.*

A. SUFFUSA, *Hb.*

A. SAUOLA, *Hb.*

A. SEGETUM, *Schiff.*

A. EXCLAMATIONIS, *L.*

A. CORTICEA, *Hb.*—One recorded by W. Evans at Barness Lighthouse.

A. CURSORIA, *Borck.*—Recorded by W. Evans.

A. NIGRICANS, *L.*

A. TRITICI, *L.*

A. OBELISCA, *Hb.*

A. STRIGULA, *Thnd.* = *PORPHYREA*, *Hb.*

A. PRECOX, *L.*—This beautiful moth, so different in its green, white, and chestnut markings from the other species of the genus that I have seen, is usually found on coasts. The late Dr Nelson of Pitcoo collected many, and gave some to T. Marjoribanks, who believed they had been captured in East Lothian. W. Evans was absolutely sceptical about this. I had subsequently, however, the good fortune to capture two specimens at light in Whittingehame House, about four miles from the sea in a straight line.

This shows what a wide range moths may have in their ordinary flight.

AGROTIS OBSCURA, *Brohm* = *RAVIDA*, *Hb.* — Said to be very irregular in its appearance. I caught several in 1870, always behind folding shutters in Whittingeane House, and have never seen them since.

A. SIMULANS, *Hufn* = *PYROPHILA*, *Fb.*

A. LUCERNEA, *L.*

NOOTUA GLABROSA, *Esp.* — The vinous-tinged variety is rare.

N. AUGUR, *Fb.*

N. PLECTA, *L.*

N. CNIORUM, *L.*

N. TRIANGULUM, *Hufn.*

N. BRUNNEA, *Fb.*

N. FESTIVA, *Hb.*

N. DAHLII, *Hb.*

N. RUBI, *View.* — Recorded by W. Evans.

N. UMBROSA, *Hb.*

N. BAJA, *Fb.*

N. CASTANEA, *Esp.*, var. "*neglecta Hb.*;" one specimen.

N. XANTHOGRAPHA, *Fb.*

TRIPHENA JANTHINA, *Esp.*

T. FIMBRIA, *L.*

TRIPHENA COMES, *Hb.* = *ORBONA*, *Fb.*

T. PRONUBA, *L.*

The four *Triphæna* all have "procryptic" fore wings and yellow black bordered hind wings. When at rest the hind wings are completely concealed by the over-lapping front wings with their mottled brown protective colouration. In flight the hind wings become visible, but I do not know whether their yellow colour is as conspicuous by night as it is by day. It is thought that, if pursued by enemies, their dropping down and closing their wings so that the yellow colour suddenly disappears, may confuse the pursuers, as, for instance, is certainly the case with some species of grasshoppers with red and blue-black bordered hind wings. If this is so, it does not appear to confuse bats, for, in all the records of experiments as to bats catching moths in July and August, *T. pronuba* is far the most common. In fact, it has been suggested that, but for their destruction by bats, they might become more or less a plague.

AMPHIPYRA TRAGOPOGONIS, *L.*

MANIA TYFICA, *L.*

M. MAURA, *L.*

PACHNOBIA RUBRICOLA, *Fb.*

TENTOCAMPA GOTHICA, *L.*

T. INCERTA, *Hufn.* = *INSTABILIS*, *Esp.*

T. STABILIS, *View.*

T. GRACILIS, *Fb.* — Recorded by W. Evans.

Some of the *Tentocampas* frequent swallow blossoms in spring, and may be seen in crowds hovering round the bushes and sucking the nectar till they fall down almost insensible.

ORTHOSIA UPSILON, *Borhk.*

O. LOTA, *Clerck.* — Recorded by W. Evans.

O. MACILENTA, *Hb.* — One recorded by W. Evans.

ANCHOCLEIS LUNOSA, *Haw.*

A. LITURA, *L.*

CERASTIS VACCINII, *L.*

SCOPELOBOMA SATELLITIA, *L.* — The caterpillar of this moth and those of *Calymnia trapezina* (see below) feed to a large extent on the larvae of other species of *lepidoptera*, as well as on leaves. They are especially fond of catching and eating the larvae of the November moth (*Chetomatobia brumata*), and in doing so perform a good work, as that insect is often a pest.

XANTHIA CITRAGO, *L.* — I only know of one specimen.

X. FULVAGO, *L.* = *CERAGO*, *Fb.*

X. FLAVAGO, *Fb.* = *SILAGO*, *Fb.*

X. CIRCELLARIS, *Hufn* = *FERRUGINEA*, *Esp.* — Largely caught by bats.

CIRRIGEDIA XERAMPHELINA, *Hb.*

CALYMNIA TRAPEZINA, *L.*

DIANTHOCIA NANA, *Rott.*

D. CAPSICOLA, *Hb.*

D. CUCUBALI, *Fuca.*

D. CARPOPHAGA, *Borhk.*

HECATERA SERENA, *Fb.* — One recorded by T. Marjoribanks.

POLIA CRT., *L.* — I have always found this moth settled by day on the white sandstone walls of a house, where it is well concealed by its similarity in colouring.

DASYPOLIA TEMPLI, *Thnb.* — An uncommon insect, especially frequenting the sea-coast in stony or rocky places. It has been recorded by W. Evans from various light-houses, but I have one specimen which was caught at light as much as four miles as the crow flies from the sea.

APOROPHYLA LUTULENTA, *Borhk.*

A. NIGRA, *Haw.*

CLEOCERIS VIMINALIS, *Fb.* — Recorded by T. Marjoribanks.

MISKIA OXYACANTHE, L.

AGRIOPIS AFRILINA, L.—One of our most beautiful moths, mottled black, white and green, and so resembling certain lichens that I have taken people up to a tree trunk on which one was settled right in front of them, and they have not been able to find it—a remarkable case of protective resemblance.

EUFLEXIA LUCIPARA, L.

PHILOPOPHORA METICULOSA, L.—Another remarkable-looking insect. The wings when at rest are creased longitudinally (instead of lying flat, as is the case with most noctues), and with beautiful varied markings that make it look like a crumpled autumn leaf.

APLECTA PRASINA, Fb. = HERBIDA, Hb.**A. OCCULTA, L.****HADENA ADUSTA, Esp.****H. PROTIA, Borhk.****H. OLIVACEA, Hb.****H. DENTINA, Esp.****H. OLBRACEA, L.****H. FIBI, L.****H. THALASSINA, Rott.****H. RECTILINEA, Esp.**—Recorded by T. Marjoribanks.**XYLOCAMPA AREOLA, Esp. = LITHORIZA, Borhk.**
—Recorded by T. Marjoribanks.**CALOCAMPA VETUSTA, Hb.**

C. EXOLITA, L.—Perhaps the most remarkable case of protective resemblance I have ever found. The moth folds its wings tightly round its body, so that it is just the shape of a half-rotten bit of stick, about as thick as a pencil at the front and more than an inch long. The front of the thorax looks like the cut or broken end of the stick, with a dark mark like the edge of the bark. On the wings are markings resembling places where there had been knots. The first time I found this moth I was completely deceived.

CUCULLIA UMBRATICA, L.**GONOPTERA LIBATRIS, L.****HABROSTOLA TRIPARTITA, Hufn = URTICE, Hb.****PLUSIA CHERYSITIS, L.****P. BRACTEA, Fb.**—I only know of one specimen.**P. FESTUCCÆ, L.****P. IOTA, L.****P. PULCHRINA, Haw. = v. AUREUM, Gn.****P. GAMMA, L.**

All these *Plusiæ* have metallic markings,

especially *P. festucae*, and some are very beautiful. *P. gamma* has a silver Y mark on each front wing—hence its name; and is abundant in summer both by night and day, often flying in hot sunshine in gardens.

CHARICLEA UMBRA, Hufn = MARGINATA, Fb.**EUCLIDIA MI, Clerck.****E. GLYPHICA, L.**—Recorded in Barrett's "Lepidoptera of the British Isles."

ZANCLOONATHA GRISEALIS, Hb. = NEMORALIS, Fb.—I only know of one specimen. It is reported in Barrett's "Lepidoptera of the British Isles," as found in the South-West of Scotland, but Meyrick says only England to York. It would, therefore, appear to be new to the East of Scotland.

Z. TABSPENNALIS, Tr.—I only know of one specimen, caught in 1856.**HYPENA PROBOSCIDALIS, L.****H. COSTÆSTRIGALIS, St.**—Recorded by W. Evans.**GEOMETRÆ.**

The geometrid caterpillars have, like all others, the three pair of true legs (answering to the three pair of legs in the perfect insect), one pair on each of the three body rings immediately behind the head, but only possess the last two of the five pairs of larval soft legs or "claspers," which are characteristic of this stage in most other *Lepidoptera*. They do not crawl, but take long steps by putting the body straight out, grasping what they aim at with the front legs and then, throwing the body into a loop, they bring the claspers at the hinder end close up to the true legs at the front.

RUMIA LUTEOLATA, L. = CRATEGATA, L.—A beautiful lemon yellow colour.

METROCAMPA MARGARITARIA, L.—This common moth is of the loveliest pale bluish green on first emergence from the pupa, but, unfortunately, the beauty of colour quickly fades away.

ELLOPIA PROSAPIARIA, L. = FASCIARIA, Schiff.**SELENIA BILUNARIA, Esp. = ILLUNARIA, Hb.****S. LUNARIA, Schiff.****ODONTOPEBA BIDENTATA, Clerck.****CROCALLIS ELINGUARIA, L.****HUMERA PENNARIA, L.****PHIGALLA PEDARIA, Fb.**

AMPHYDASIS BETULARIA, L.—Like many other *geometra*, these larvæ strongly resemble twigs, the head being like a bud, with other irregularities of shape which add

to the likeness. They have been found by the experiments of Professor Poulton, F.R.S., and others, to change their colour to approximate to their surroundings, as does a chameleon, but the change takes place very slowly, requiring several hours, or even a day or two. They can become of different shades of brown or green, or almost black, and, if kept close to white paper, become of a dirty white colour. *Odontopera bidentata*, mentioned above, is almost more remarkable, and its larvæ, if kept surrounded by lichen-covered bark, will produce green lichen-coloured spotted marks on their bodies.

CLEORA LICENARIA, *Hufn.*

BOARMIA REPANDATA, *L.*

B. GEMMARIA, *Brahm.* — I only know of one specimen, but this species is so like the abundant *repandata* that it may easily be overlooked.

GNOPHOS OBSCURARIA, *Hb.*

GEOMETRA PAPILIONARIA, *L.* — One specimen at light recorded by T. Marjoribanks.

ASTHENIA CANDIDATA, *Schiff.*

VENUSIA CAMBRICA, *Curt.* — Recorded by W. Evans.

A. BISSETATA, *Hufn.*

A. DILUTARIA, *Hb.* = *OSSEATA*, *Haw.*

A. VIRGULARIA, *Hb.* = *INCANARIA*, *Hb.*

A. AVERSATA, *L.*

CABERA PUSARIA, *L.*

C. EXANTHEMATA, *Scop.*

MACARIA LITURATA, *Clerck.*

HALIA VAUARIA, *L.*

NUMERIA PULVERARIA, *L.* — Recorded by T. Marjoribanks.

SCODIONA BELGIARIA, *Hb.*

EMATURGA ATOMARIA, *L.*

BUPALUS PINIARIA, *L.*

ABRAXAS GROSSULARIATA, *L.*

This insect is another marked instance of "warning colouration," being nasty to taste, and marked with spots of black and yellow on a white ground. The caterpillar also is conspicuous and does not seek concealment. In the case of *Euchelia Jacobææ* (see page 173) both moth and caterpillar are conspicuous and never conceal themselves, while the pupa, being underground, and thus protected from enemies, is brown, like most pupæ. The *grossulariata* pupa, however, is slung on to a twig of its food plant, and is not concealed at all; and it is very conspicuous, be-

ing banded with alternate stripes of black and yellow, as a warning to its enemies. As mentioned before, this is a "Wasp pattern" and, consequently, likely to be a very efficient warning.

LOMASPHILIS MARGINATA, *L.* — Recorded by T. Marjoribanks.

HYBERNIA RUPICAPRARIA, *Hb.* — Recorded by W. Evans.

H. LEUCOPHREARIA, *Schiff.*

H. AURANTIARIA, *Esp.*

H. MARGINARIA, *Borhk.* = *PROGEMMARIA*, *Hb.*

H. DEFOLIARIA, *Clerck. L.*

CHEIMATOBIA BRUMATA, *L.*

C. BOREATA, *Hb.*

Some of the *Hybernia*s and *Cheimatobia* *brumata* are pests in the south in some years, almost denuding trees of foliage. The females are almost wingless.

OPORARIA DILUTATA, *Borhk.*

O. FILIGRMMARIA, *H.S.*

LARENTIA DIDYMATA, *L.* — I have one marked aberration of this.

L. MULTISTRIGARIA, *Haw.*

L. OESIATA, *Lang.*

L. OLIVATA, *Borhk.*

L. VIRIDARIA, *Fb.* = *PECTINITARIA*, *Fuss.*

EMMELESIA ALOHEMILLATA, *L.*

E. ALBULATA, *Schiff.*

E. DECOLORATA, *Hb.* — Recorded by W. Evans.

E. UNIFASCIATA, *Haw.* — Recorded by W. Evans.

E. MINORATA, *Tr.* = *ERECTATA*, *Curt.*

E. ADEQUATA, *Bork.* = *BLANDIATA*, *Hb.* — Recorded by W. Evans.

EUPITHECIA LINARIATA, *Fb.*

E. OBLONGATA, *Thnb.* = *CENTAURIATA*, *Fb.*

E. SUBFULVATA, *Haw.*

E. PLUMBEOLATA, *Haw.*

E. PYGMATA, *Hb.* — Recorded by W. Evans.

E. HELVETICARIA, *Bdv.* — Bred by W. Evans, Lammermuirs.

E. SATYRATA, *Hb.*

C. CASTIGATA, *Hb.*

E. FRAXINATA, *Crewe.*

E. INDIGATA, *Hb.* — Recorded by W. Evans.

E. NANATA, *Hb.*

E. VULGATA, *Haw.*

E. ABSYNTHIATA, *Clerck.*

E. MINUTATA, *Gn.*

E. ASSIMILATA, *Gn. D.B.L.*

E. TENUITATA, *Hb.*

E. LARICIATA, *Frr.*

E. ABBREVIATA, *St.*

E. EXIGUATA, *Hb.*

- E. SOBRINATA, *Hb.*
 E. RECTANGULATA, *L.*
 THERA JUNIPERATA, *L.*
 T. VARIATA, *Schiff* = OBELISCATA, *Hüb.*
 T. FIRMATA, *Hb.*
 HYPSEPETES TRIFASCIATA, *Borhk.* = IMPLUVIATA, *Hb.*—This is one of the most variable moths we have. No two specimens seem alike in marking, and the ground colour varies from all shades of brown to bright green.
 H. SORDIDATA, *Fb.*
 MELANTHIA BICOLORATA, *Hufn.*
 M. OCELLATA, *L.*
 MELANIPPE TRISTATA, *L.*
 M. SOCIATA, *Borhk.* = SUBTRISTATA, *Haw.*
 MELANIPPE MONTANATA, *Borhk.*
 M. FLUCTUATA, *L.*—A remarkable aberration named "Geomolla" was found at Lochend, Dunbar, by Mrs Meldola, and is now in the Hope Museum at Oxford.
 ANTICLEA RUBIDATA, *Hb.*
 A. NIGROFASCIATA, *Goze.* = DERIVATA, *Borhk.*
 COREMIA MUNITATA, *Hb.*
 C. DESIGNATA, *Hufn.* = PROPUGNATA, *Fb.*
 C. FERRUGATA, *Clerck, L.*
 CAMPTOGRAMMA BILINIATA, *L.*
 PHIBALAPTERYX VITTATA, *Borhk.* — Recorded by W. Evans.
 TRIPHOSA DUBITATA, *L.*
 CIDARIA SITERATA, *Hufn.* = PSITTACATA, *Schiff.*
 C. NIATA, *L.*
 C. CORYLATA, *Thnb.*
 C. TRUNCATA, *Hufn.* = RUSSATA, *Borhk.*
 C. IMMANATA, *Borhk.*
 C. SUFFUMATA, *Hb.*
 C. SILACEATA, *Hb.*
 C. PRUNATA, *L.*
 C. TESTATA, *L.*
 C. POPULATA, *L.* = DOTATA, *Clerck.*
 C. POPULATA, *L.*
 C. FULVATA, *Fors.*
 C. DOTATA, *L.* = PYRALIATA, *Fabr.* = ASSOCIATA, *Staud.*
 C. ASSOCIATA, *Borhk.* = DOTATA, *Guen non L.*
 PELURGA COMITATA, *L.*
 EUROLIA CERVINATA, *Schiff.*
 E. LIMITATA, *Scop.* = MENSURARIA, *Schiff.*
 E. PLUMBARIA, *Fb.* = PALUMBARIA, *Borhk.*
 ANATIS PLAGIATA, *L.*
 CHESIAS SPARTIATA, *Fues.*
 TANAGRA ATRATA, *L.* = CHEROPHYLLATA, *L.*
 I have already mentioned (page 176) that many geometrid caterpillars resemble small

twigs in shape and colour. They greatly add to this resemblance by their habit of adhering by their "claspers" to the twigs of the trees on which they feed, and from which they stick out straight and stiff. Instinct makes them stretch themselves out at an angle similar to that of the real twigs, of which they thus seem to form a part. Sometimes, however, it is amusing to see how the instinct fails, as when the caterpillars turn the wrong way and face backwards instead of forwards on the twig. This reversed position is at once detected by the human enemy. I have often wondered whether the feathered enemies also detect the mistake and promptly eat the unfortunate larva which has betrayed itself.

PARALIDES.

- AGLOSSA PINGUINALIS, *L.*
 PYRALIS PARINALIS, *L.*
 SCOPARIA AMBIGUALIS, *Tr.*—For the moorland form of this see *S. ATOMALIS*.
 S. CEMBRÉ, *Haw.*
 S. DUBITALIS, *Hb.*
 S. MURANA, *Curt.*
 S. LINEOLA, *Curt.*
 S. CRATEGELLA, *Hb.*
 S. TRUNCIOLELLA, *Sta.* = MERCURIELLUS, *Zinck.*
 S. ANGUSTEA, *Steph.*
 S. ATOMALIS, *Dbl.*—See *ambigualis* above.
 S. PALLIDA, —Recorded by W. Evans.
 NOMOPHILA NOCTUELLA, *Schiff.*
 PYRAUSTA OSTRINALIS.
 HERBULA CESPITALIS, *Schiff.*
 SCOPULA LUTEALIS, *Hb.*
 S. OLIVALIS, *Schiff.*
 S. PRUNALIS, *Schiff.*
 S. FERRUGALIS, *Hb.*—Recorded by W. Evans.
 SPILODES STICTICALIS, *L.*
 PIONEA PORFICALIS, *L.*
 PLATYPTILIA OCHRODACTYLA, *Hb.*
 P. BERTRAMI, *Ross.*
 P. ISODACTYLUS, *Zell.*—Recorded by Professor Meldola.
 P. GONODACTYLA, *Schiff.*
 AMBYPTILIA ACANTHODACTYLA, *Hb.*
 A. COSMODACTYLA, *Hb.* — Recorded by W. Evans.
 OXYPTILUS TEUCRI, *Greening, Jordan.* — Recorded by W. Evans.
 MIMÆSEOPTILUS BIPUNCTIDACTYLA, *Haw.*
 M. PTERODACTYLUS, *L.*

PTEROPHORUS MONODACTYLUS, *L.*

ALUCITA HEXADACTYLA, *L.* = *POLYDACTYLA*, *Hb.*

The last eleven moths are called "Plume moths," because, unlike any other family, the wings are each divided into several narrow plume-like sections; in fact, the last one, *A. hexadactyla*, has twelve such lobes, and looks like a little bit of fluffy down.

CRAMBUS FRATELLUS, *L.*

C. PINELLUS, *L.*

C. DUMETELLUS, *Hb.*

CRAMBUS PERLELLUS, *Scop.*

C. TRISTELLUS, *Fb.*

C. INQUINATELLUS, *Schiff.*

C. GENICULEUS, *Haw.*

C. CULMELLUS, *L.*

C. HORTUPELLUS, *Hb.*

HOMOBOSOMA NIMBELLA, *Zell.*—I only know of one specimen.

H. BINEVELLA, *Hb.*—Recorded by W. Evans.

EPHESTIA ELUTELLA, *Hb.*

PHYCIS FUSCA, *Haw.*

DIORYCTHIA ABIETELLA, *Zinck.*—I only know of one specimen.

APHOMIA SOCIELLA, *L.*

ACHROIA GRISELLA, *Fb.*—I only know of one specimen.

TORTRICES.

All these moths, and also the *Tineæ* which follow, are small, and are popularly called "*Mieros*" by entomologists. Many of the larvæ live in rolled-up leaves or in the stems of plants.

TORTRIX XYLOSTRANA, *L.*

T. HEPARANA, *Schiff.*

T. RIBEANA, *Hb.*

T. COSTANA, *Fb.*—Recorded by W. Evans.

T. VIBURNANA, *Fb.*

T. PALLEANA, *Hb.*

T. VIRIDANA, *L.*—This beautiful bright green little moth is one of the greatest scourges to oak trees in the south of England, but I have never seen it common enough here to do any appreciable damage.

T. MINISTRANA, *L.*

AMPHYSA GERMINIANA, *Schiff.*

LEPTOGRAMMA LITERANA, *L.*

L. NIVEANA, *Fb.*—So far as I know, this moth has not previously been recorded south of Perth.

PERONEA SPONSANA, *Fb.* = *FAVILLACEANA*, *Hüb.* *Weik.*

P. MIXTANA, *Hb.*—A heather-loving species,

but I have caught it at light $1\frac{1}{2}$ miles in a straight line from the nearest heather.

P. SCHALLERIANA, *L.* = *COMPARANA*, *Hb.* = *PERPLEXANA*, *Bar.*

P. VARIEGANA, *Schiff.*—A most variable moth, the wings being sometimes all mottled shades of brown and gray, and sometimes largely spotted with white, and sometimes half white and the rest dark mottled. Settled on a leaf, it often resembles a bird's dropping.

P. HASTIANA, *L.*—Recorded by Professor Meldola.

P. MACCANA, *Tr.*—One recorded by W. Evans.

P. FERRUGANA, *Tr.*

P. CALEDONIANA, *Sph.*

P. ASPERSANA, *Hb.*

P. SHEPHERDANA, *Sph.*—Larva on meadow sweet. Recorded by W. Evans.

RHACODIA CAUDANA, *Fb.*—Looks as though it had a piece cut out of the front of each front wing.

TERAS CONTAMINANA, *Hb.*

DICTYOPTERYX LOEFLINGIANA, *L.*

D. BERGMANNIANA, *L.*

ARGYROTOZA CONWAYANA, *Fb.*

PTYCHOLOMA LECHIANA, *L.*

PENTHINA CORTICANA, *Hb.* = *PICANA*, *Frol.*

P. BETULETANA, *Haw.*

P. SOROCULANA, *Zell.*—I only know of one specimen.

P. PRUNIANA, *Hb.*

P. VARIEGANA, *Hb.* = *CYNOSBATELLA*, *L.*

HEDYA OCELLANA, *Fb.*

H. NEGLECTANA, *Dup.*

SPILONOTA TRIMACULANA, *Haw.* = *SUFFUSANA*, *Zell.*

PARDIA TRIPUNCTANA, *Fb.*

SERICORIS LITTORALIS, *Curt.*—Recorded by W. Evans.

S. CÆSPITANA, *Hb.*

S. LAGUNANA, *Dup.*

MIXODIA SCHULZIANA, *Fb.*—One caught by T. Marjoribank, and one by W. Nisbet in heather 186—.

ORTHOTENIA ANTIQUANA, *Hb.*

O. STRIANA, *Schiff.*

O. ERICETANA, *Westw.*

CNEPHASIA POLITANA, *Haw.*

C. MUSCULANA, *Hüb.*

SCIAPHILA ABRABANA, *Dup.*

S. SUBJECTANA, *On.* = *INCERTANA*, *Tr.*

S. VIRGAUREANA, *Tr.*

S. OCTOMACULANA, *Haw.*

CAPUA FAVILLACEANA, *Hb.*
 CLEPSIS RUBRICANA, *Fr.*
 BACTRA LANCEOLANA, *Hb.*
 B. PURPURANA, *Haw.*—Recorded by W. Evans.
 PHOXOPTERYX UNGUICELLA, *L.*
 P. MYRTILLANA, *Tr.*
 P. LUNDANA, *Fb.*
 GRAPHOLITHA RAMELLA, *L.*
 G. NIBELLA, *Clerck.*
 G. NIGROMACULANA, *Haw.*
 G. SUBOCCELLANA, *Don.*
 G. TRIMACULANA, *Don.*
 G. PENKLERIANA, *Fisch.*
 G. NIGRICANA, *Hb.*
 G. NEVANA, *Hb.*—Some of these are probably the *Geminiana* form.
 G. GEMINIANA, *St.*
 PHLEODES TETRAQUETANA, *Haw.*
 P. IMMUNDANA, *Fisch.*
 BATODES ANGSTIORANA, *Haw.*
 PÆDISCA BILUNANA, *Haw.*—I only know of one specimen.
 P. RATZBURGHIANA, *Rtts.*
 P. RUBINIOSANA, *H.S.*
 P. CORTICANA, *Hb., Schiff.*
 P. OPHTHALMICANA, *Hb.* — Recorded by W. Evans.
 P. OCCULTANA, *Dough.*
 P. SOLANDRIANA, *L.*
 P. SORDIDANA, *Hb.*—Recorded by W. Evans.
 EPHIPPIPHORA SIMILANA, *Hb.*
 E. CIRSIANA, *Zell.*
 E. PFLUGIANA, *Haw.*
 E. BRUNNICHIANA, *Frol.*
 E. TURBIDANA, *Tr.*
 E. TRIGEMINANA, *Steph.*
 OLINDIA ULMANA, *Hb.*—This moth, coloured in patches of black and white, strongly resembles bird dropping, and it is interesting to note that its habits encourage this mistake. Unlike most moths, instead of concealing itself when at rest, it sits on the upper sides of leaves in full view, and can be easily captured in a pill box without its taking flight.
 COCCYX MEMORIVAGA, *Tgstr.*
 C. TADELLA, *Clerck, L.*
 C. USTOMACULANA, *Curt.*
 C. NANANA, *Tr.*
 PAMPLUSIA MERCURIANA, *Hb.*
 RETINIA PINIVORANA, *Zell.*
 CARPOCAPSA POMONELLA, *L.* — Sometimes very destructive in apple orchards.

ENDOPISA NIGRICANA, *Steph.*—Recorded by W. Evans.

STIGMONOTA CONIFERANA, *Ratzb.*

S. PERLEPIDANA, *Haw.*

S. REGIANA, *Zell.*—I only found this on one tree, about 1872. Since this tree has been cut down, I have never found it again, and I do not know of other specimens having been caught in the county. It is a beautiful and conspicuous little insect, with its yellow spots on black ground.

DICRORAMPHA PETIVERELLA, *L.*

D. PLUMBANA, *Scop.*

D. SATURNANA, *Gn.*

D. PLUMBAGANA, *Tr.*

D. ACUMINATANA, *Zell.*

D. TANACETI, *St. non Willk.*

PYRODES RHEDEELLA, *Clerck, L.*

CATOPTRIA ULICETANA, *Haw.*

C. CANA, *Haw.*

C. SCOPOLIANA, *Haw.*

TRYCHERIS AURANA, *Fb.*

SYMETHIS PARIANA, *Clerck.*

S. OXYACANTHELLA, *L.*

EUPOCILLIA NANA, *Haw.*

E. ATRICAPTANA, *St.*

E. ANGUSTANA, *Hb.*

XANTHOSSETIA ZORGANA, *L.*

X. HAMANA, *L.*

ARGYROLEPIA BADIANA, *Hb.*

CONCHYLIS STRAMINEA, *Haw.*

APHELIA OSSEANA, *Scop.*

TORTRICODER HYEMANA, *Hb.*

TINEÆ.

These comprise the smallest *lepidoptera* in the country, amounting to more than 700 species. The larvæ live in very various ways, and are specially interesting and worth study. LEMNATOPHILA PHRYGANELLA, *Hb.* — Wings of female useless.

EXAFATE CONGELLATELLA *Clerck.*—In Meyrick's "Revised Handbook of British Lepidoptera" the range of this moth is described as "England to York, Local," and the larva is said to feed on "*Rhamnus, ligustrum, Cratægus, etc.*" I have found it common on heather on Lammermuir Hills, in parts where none of these shrubs grow. As the female is practically wingless, so that it cannot fly to where they grow, it must have some other food plants. I have never found the female.

DIURNEA FAGELLA, *Fb.*—Wings of female useless.

SOLENOBIA TRIQUETRELLA, *Fisch* = *INCONSPICUELLA*.—This singular moth is liable to be parthenogenetic for several generations in succession, and the females greatly outnumber the males. W. Evans has found the larvae (which live in cases which they make and feed on lichens found on palings and tree trunks), but only reared females. These are wingless.

OCHSENSHEIMERIA BISONTIELLA, *Zell.*

SCARDIA GRANIELLA, *L.*

BLABOPHANES RUSTICIELLA, *Hb.*

MONOPSIS WEAVERIELLA, *Scott.*

TINEA TAPETZELLA, *L.*

T. FRILLIONELLA, *L.*—The commonest and most destructive of "clothes moths."

T. LAPPELLA, *Hb.*

T. SEMIFULVELLA, *Haw.*

PHYLLOPARIA SISTRIGIELLA, *Haw.*—Recorded by W. Evans.

LAMPROMIA QUADRIFUNCTELLA, *Fb.*

L. LUXELLA, *Hb.*—See "Naturalist" 1851, p. 71. Logan, Transient.

L. RUBIELLA, *Bjerk.*

MICROPTERYX CATHIELLA, *L.*—Recorded by W. Evans.

M. ABUNCIELLA, *Scop* = *SEPPHELLA*, *Fb.* — Recorded by W. Evans.

M. SUBPURPURELLA, *Haw.* — Of these tiny metallic purple-and-gold *micropterygidae* Meyrick writes:—"In this highly interesting group is fortunately preserved a primitive type of *lepidoptera* whose existence could never have been inferred from a study of other forms. Through the *micropterygidae* so near an approach is made in all essential particulars to the *Trichoptera* (caddis flies) that there are even now competent students who would transfer them to that group." Meyrick also considers that their nearest allies are the *Hepialidae* — for instance, *H. humuli* (the ghost moth—see ante p. 173), of which the spread of wings is up to 2½ inches. Indeed, some exotic species exceed 6 inches. Compare this with our *micropteryx*, which measure about an eighth of an inch! The families *Micropteryx* and *Hepialus* are found in the most widespread parts of the world, particularly in New Zealand and Australia.

NEMOPHORA SCHWARZIELLA, *Zell.*

ADELA FIBULELLA, *Fb.*

A. VIRIDIELLA, *L., Scop.*

The genus *Nemophora* and *Adela* have very long antennae—much longer than the body.

SWAMMERDAMIA COMBINIELLA, *Hb.*

S. CESTIELLA, *Hb.* VAR. *ORISEOCAPITELLA*, *Sta.*

—Recorded by W. Evans.

S. LUTARIA, *Sta.*

S. PYRELLA, *Vill.*

HYPONOMEUTA PADELLUS, *L.*—Recorded by W. Evans.

H. EVONYMELLUS, *L.*

The larvae of these two species are gregarious and feed in a large common web, made by themselves on the trees they feed on, in some cases doing much damage.

PRAYS CURTISELLUS, *Don.*

PLUTELLA CRUCIFERARUM, *Zell* = *MACULIPENNIS*, *Curt.*

—This small inconspicuous moth is stated by Meyrick to be "truly cosmopolitan, the most universally distributed species of the *lepidoptera*, occurring everywhere and ascending to above 12,000 feet. The wide range of this species is no doubt in part artificial, but it soon establishes itself, and seems to flourish equally in all climates." It sometimes does much damage to seedling turnips, etc.

P. ANNULATIELLA, *Curt.* — Recorded by W. Evans.

P. DALELLA, *Sta.*

CEROSTOMA VITIELLA, *L.*

C. RADIATELLA, *Don.* — Extraordinarily variable from dark brown to pale buff, sometimes striped half and half, or mottled.

C. COSTELLA, *Fb.*

HARPIPTERYX XYLOSTELLA, *L.* — Front wings curiously hooked.

DEPRESSARIA COSTOSA, *Haw.*

D. FLAVELLA, *Hb.*

D. ASSIMILELLA, *Tr.*

D. ARENELLA, *Schiff.*

D. PROPINQUELLA, *Tr.*

D. SUBPROPINQUELLA, *Sta.*

D. ALSTROMERIANA, *Clerck.*

D. ANGELICELLA, *Hb.*

D. AFFLANA, *Fb.*

D. DISCIPUNCTELLA, *H.-S.*

D. NERVOSA, *Haw.*

D. BADIELLA, *Hb.*

D. HERACLEANA, *DeGeer.*—Most abundant on cow parsnip. (*Heracleum Sphondylium*.)

GELECHIA BRICETIELLA, *Hb.*

- G. MULINELLA, Zell.
 G. LONGICORNIS, Curt. — I have found a hitherto undescribed melanic form.
 G. DIFFINIS, Haw.
 G. DISTINCTELLA, Zell.
 G. CELERELLA, Dougl. — Recorded by W. Evans.
 BRYOTROPHA TERRELLA, Hb.
 B. DESERTELLA, Dougl.
 B. POLITELLA, Dougl.
 B. SENECTELLA, Zell.
 B. MUNDELLA, Dougl.
 B. SIMILIS, Dougl.
 B. DOMESTICA, Haw.
 LITA ACUMINATELLA, Sircom.
 L. ARTEMESIELLA, Tr. — Recorded by W. Evans.
 L. SEMIDEGANDRELLA, Threlfall. — Recorded by W. Evans.
 L. MARMOREA, Haw.
 L. OBSOLETTELLA, Fisch. — Recorded by W. Evans.
 L. PLANTAGINELLA, Sta. — Recorded by W. Evans.
 TELEIA NOTATELLA, Hb.
 T. FUOTIVELLA, Zell.
 T. DODECELLE, L.
 ARGYRITIS TARQUINIELLA, Sta.
 NANNODIA STIPELLA, Hb.
 MONOCHROA TENERELLA, Hb.
 BRACHYDROSATA CINERELLA, Clerck.
 PARASIA METZNERIELLA, Sta. — Recorded by W. Evans.
 CHELARIA HUBNERELLA, Don.
 PLEUROTA BICOSTELLA, Clerck.
 DASYCERA SULPHURELLA, Fb.
 CECOPHORA FULVIGUTTELLA, Zell. — Recorded by W. Evans.
 CE. SUBAQUILELLA, Edl. Sta.
 CE. FUSCESCENS, Haw.
 CE. PSEUDOSPHECTELLA, Sta. — Not a native of Europe, accidentally introduced about 1840; now very common in houses.
 ENDROSIS FENESTRELLA, Scop.
 BUTALIS SENESCENS, Sta. — Recorded by W. Evans.
 PANCALIA LEWENHOEKELLA, L. — Recorded by W. Evans.
 The family *Gelechiadae* (from *Depressaria* to *Pancalia*) are remarkable for having the hind wings more or less trapezoidal, the termen more or less emarginate — a peculiarity found in no other moths.
 GLYPHPTERYX FUSCOVIRIDELLA, Haw.
 G. THRASONELLA, Scop. Sta.

- G. FISCHERIELLA, Zell.
 ARGYRESTHIA GLABRATTELLA, Zell.
 A. ATMORELLA, Banks.
 A. EPHIPPPELLA, Fb.
 A. NITIDELLA, Fb.
 A. SEMITESTACELLA, Curt.
 A. SPINIPELLA, Zell.
 A. ALBISTRIA, Haw. Sta.
 A. MENDICA, Haw.
 A. BETINELLA, Zell.
 A. CURVELLA, L.
 A. GORDATELLA, L.
 A. BROCKELLA, Hb.

All the genus *Argyresthia* have the habit of standing (apparently) on their heads, with the body and folded wings up in the air at an angle of 45 degs. from what they are resting on. Some species are very beautiful, as, for instance, *A. brockella* — silvery white and shining gold.

- CEDESTIS FARINATELLA, Dup.
 C. GYSELINELLA, Dup.
 OCNEROSTOMA PINIARIELLA, Zell.
 ZELLERIA HEPARIELLA, Mann. Sta.
 GRACILARIA ALCHIMIELLA, Scop. = SWEDERELLA, Thnb. Sta.
 G. ELONGELLA, L.
 G. TRINGIPENNELLA, Zell.
 G. SYRINGELLA, Fb.
 G. AUROGUTTELLA, St. Sta. — Recorded by W. Evans.

Unlike the genus *Argyresthia*, the moths of the genus *Gracilaria* stand on their tails, with the fore part supported by their long parti-coloured legs, which, bent out at right angles from the body, have a peculiar and pretty effect. The wings are often brightly coloured.

- CORISCUM SULPHURELLUM, Haw.
 ORNIX ANGLICELLA, Sta.
 O. SCOTICELLA, Sta.
 O. GUTTEA, Haw.
 COLEOPHORA FABRICIELLA, Vill.
 C. ALBICOSTA, Haw.
 C. THEBINELLA, Tgstr. Sta.
 C. TROGLODYTELLA, Dup. Sta.
 C. LINEOLEA, Haw. Sta.
 C. MURINIPPELLELLA, Fisch.
 C. CESPITTELLA, Zell. Sta.

These last two moths, favoured by entomologists with eleven syllables to their names, are only about an eighth of an inch long!
 C. GLAUCIPENNELLA, Wood. — One specimen

named by Professor Waters, either this or *caespitiella*.

- C. LARIPENNELLA, Zell.
 C. JUNCIOLELLA, Sta.
 C. LARICELLA, Hb.
 C. NIGRICELLA, Hb. Sta.
 C. FUSCEDINELLA, Zell. Sta.
 C. ORBITELLA, Zell. Sta.
 C. GRYPHIPENNELLA, Bouche. Sta.
 C. VITISELLA, Grigs. Sta.
 C. SOLITARIELLA, Zell. Sta.—Recorded by W. Evans.

A large number of the *Tinea* larvae feed in mines in leaves, making pale-coloured marks showing the shape of every mine. Some mine in the upper side of the leaf, others in the under side, but each species keeps to one side only. Some mines are long and snake-like; others are blotches. Even unobservant people must have often noticed them, though without having any idea as to their cause. Others of these tiny insects (notably of the genus *Coleophæa*, of which there are between 70 and 80 kinds found in Great Britain, and about 500 are known in the world) make little cases for themselves in which they live, with their heads and front parts of their bodies protruding when feeding. These cases are usually cut out of bits of the leaves on which they feed and are of the most varied shape. When the caterpillar grows too large for its case it leaves it and makes another. Instinct impels it to make the new case much too large, and thus allows considerable growth before requiring another still more enlarged case. They usually pupate inside the case, which is stuck up on a leaf or some other object, but, being very small, they are not often noticed.

- BATRACHEDRA PRÆANGUSTANA, Haw. Sta.
 CHAULIODUS CHREROPHYLLELLUS, Goze.
 LAVERNA LACTEELLA, St. Sta.—Recorded by W. Evans.
 L. OACHRACEELLA, Curt. Sta.—Recorded by W. Evans.
 L. SUBBISTRIGELLA, Curt. — Recorded by Professor Meldola.
 L. HELLERELLA, Dup. = ATRA, Haw.
 CHRYSOCYSTA SCHRANKELLA, Hb. Sta. — Recorded by W. Evans.
 CHRYSOCORYS FESTALIELLA, Hübner.
 ELACHISTA APICIPUNCTELLA, Sta.

- E. ALBIFRONTTELLA, Hb. Sta.
 E. ATRICOMELLA, Sta.
 E. LUTICOMELLA, Zell.
 E. KILMUNELLA, Sta.
 E. STABIELLA, Sta.
 E. NIGRELLA, Hb.
 E. SUBNIGRELLA, Dougl. Sta.—Recorded by W. Evans.
 E. OBSCURELLA, Sta. = SUBOBSCURELLA, Dbl.
 E. MEGERLELLA, Zell. Sta.
 E. RHYNCHOSPORELLA, Sta.
 E. TRIATOMA, Haw. Sta.
 E. RUFOGINEREA, Haw. Sta.
 E. CYGNIPENNELLA, Hb. St. = ARGENTELLA, Clerck.

- TISCHERIA COMPLANELLA, Hb.
 LITHOCOLLETIS POMIFOLIELLA, Zell. Sta.
 L. CORYLI, Sta. Nicelli.
 L. SPINICOLELLA, Kol. Sta.
 L. FAGINELLA, Mann. Sta.
 L. ULMIFOLIELLA, Hb. Sta.
 L. SPINOLELLA, Dup. Sta.
 L. QUEREIFOLIELLA, Fisch. Zell. Sta.
 L. MESSANIELLA, Zell. Sta. — Abundant on *Quercus ilex*, making conspicuous dead blotches on the leaves. Often three broods in the year.
 L. CORYLIFOLIELLA, Haw. = CALDONIELLA, Sta.
 L. SCOPARIELLA, Tisch. Sta.
 L. CRAMEBELLA, Fb. Sta.
 L. ALNIFOLIELLA, Hb. Sta.
 L. TRISTRIGELLA, Haw. Sta.
 LYONETIA OLERCEIELLA, L.
 CEMIOTOMA SPARTIFOLIELLA, Hb. St.
 L. LABURNELLA, Heyd. Sta.
 C. SUTTELLA, Zell. Sta. — Recorded by W. Evans.

- OPOSTEGA CREPUSCULELLA, Fisch. Zell. Sta.
 BUCCULATRIX NIGRICOMELLA, Zell. Sta.
 B. ULMELLA, Mann. Zell. Sta.
 NEPTICULA BASALELLA, Hs.
 N. TURICELLA, Hs.
 N. SUBBIMACULELLA, Haw.
 N. GRAYIOSELLA, Sta.—Recorded by W. Evans.
 The neuration of the *Nepticulidæ* as well as other primitive characters, utterly unlike those of any other *lepidoptera*, "mark them out as peculiarly distinct." (Meyrick.) They are the smallest moths we have, and are difficult to see. I have no doubt that any entomologist practised in breeding them would find many more species in East

Lothian. Species are found all over the world, and in the Andes of South America, up to 12,000 feet above the sea. Sixty-seven

species are recorded in the British Isles. The larvae live in leaves which they mine.
TRIPURICOLA IMMUNDILLA, Zell. *Sta.*

In conclusion, I add a list of the books on British *lepidoptera* which I have found of most use:—

Lepidoptera of the British Islands, by C. G. Barrett, F.E.S.; in eleven volumes, published up to 1907.

A Revised Handbook of British Lepidoptera, by E. Meyrick; published in 1928 by Watkins & Doncaster, 36 Strand, London.

British Tortrices, by S. J. Wilkinson; 1859.

Lepidoptera tineinâ, by Stainton; 1854.

Practical Hints for the Field Lepidopterist, 3 vols., by J. W. Tutt, F.E.S.; published by Elliot Stock up to 1908.

For beginners interested in the natural history as well as in the mere collecting of *lepidoptera*, there is no more delightful little book than

Butterfly Lore, by Dr Eltringham; published by Oxford University Press, 1923.

ALICE BLANCHE BALFOUR.

YESTER AND ITS "GOBLIN HA'."

According to the author of "Robinson Crusoe," who once visited Yester, one of the family heirlooms in the mansion there is a genealogical tree of the family tracing their descent back to the year 970. In this genealogical table the three peasants of the name of Hay, who, according to George Buchanan and Hector Boece, rallied the Scots to victory against the Danes at Luncarty about the same date, have no place. Unarmed peasants, however great and heroic their deeds in picturesque legend, do not win battles against trained and armed warriors in sober history. To follow the ancestry of the House of Yester to so remote a period as 970 would take us over to Normandy, from whence they came with William the Conqueror to England in search of wealth and fame, and later to Scotland for the same reasons when they settled in the Lothians.

The first authentic ancestor of the Tweeddale family in East Lothian was an Anglo-Norman knight, Sir Hugh Gifford—to adopt the modern spelling of his name—one of the many Anglo-Norman immigrants so warmly welcomed to the Scottish Court by the descendants of Malcolm Canmore and Queen Margaret, and more especially by David I and his grandsons, Malcolm IV and William the Lion, when the predominating influence in establishing a strong monarchy and ordered government in Scotland was Norman rather than Anglo-Saxon or Celtic. The Normans were the most renowned warriors in Europe in that age. To these mail-clad Norman knights, who, as one of them said, were infest with victory, the Malcolm Canmore dynasty, largely of Norman blood themselves, and whose hold on the throne was none too secure, owed their success in quelling the numerous revolts among their Celtic subjects—revolts in large measure provoked by their deliberate introduction of Norman influence and their favour shown to men of Norman race.

Sir Hugh Gifford is said to have settled in East Lothian in the days of David I, that is, before 1153, but the earliest charter in the family archives at Yester House is one of William the Lion dated 1166, confirming him in the possession of his estates granted him by that king's brother Malcolm IV

and his mother Ada, Countess of Huntingdon. These lands lay on the south side of the Tyne opposite Haddington. They included the village of Giffordgate adjacent to the Nungate, and separated from it by the ford across the Tyne, the lands of Lethington, more familiarly known to-day as Lennoxlove, which Edolf son of Ginel held and extended southwards to the Sandyford Burn where these possessions marched with the lands of Yester, some of which were previously owned by Gamel.

Here we see the Norman Hugh Gifford displacing two Anglo-Saxons in the persons of Edolf and Gamel in the possession of lands, but we are given no reason for the change. It was merely the substitution of one overlord for another and did not necessarily make any immediate difference to the tenants, who would now cultivate the land for the Norman Giffords as they had previously done for the Anglo-Saxon Edolf and Gamel. But place-names in some parts of the Yester demesne still perpetuate the memory of its ancient Anglo-Saxon owner Gamel who is otherwise quite unknown to us — "in the town of Bothans near the cross which leads to the town of Gamelston" being a not infrequent location in the charters preserved at Yester House. On the banks of the Gamelston Burn, on the right of the old road as one goes to Long Yester, once stood the ancient farm town of Gamelston where the foundations of the farm steading may still be traced, and the Tower of Gamelshiels near Millknowe has its name from the shielings where the "herds" of Gamel went "summering" with their flocks to the hill pastures of the Lammermoors. The memory of the tragic story of the Lady of Gamelshiel Tower who was one evening taking a walk at a little distance below the Tower when a great wolf sprang from the wood and worried her to death, and whose mangled body her grief-stricken husband buried in the castle courtyard that he might ever have her grave within sight, may still linger in the district.

With the Normans came the castle, which, as a product of Norman feudalism, was quite unknown in Scotland until introduced by the Anglo-Norman immigrants, whose services the Scottish monarchs of their time so generously rewarded with gifts of land. As the thing itself was new so was

its name, for the word castle in the sense of stronghold came to us through the Norman-French with the Normans. Previous to the Norman infiltration into Scotland the word castle meant a village, in which sense it is constantly used in older versions of the Scriptures.

But the castle of this period, the 12th century, was not built of stone and lime but of earth and timber. It consisted of a flat-topped mound surrounded by a ditch and surmounted by a palisade, within which stood a wooden tower forming the lord's house. The first castle of the Giffords at Yester must have been of this kind and of such materials, for stone castles were unknown in Scotland, and were even exceptional in England, before the beginning of the 13th century. Where the first Sir Hugh Gifford erected his earth and timber stronghold when he received the lands of Yester we do not know, for, having been of such perishable materials, all trace of it has long since disappeared. But there is no record of any Castle of Yester until a century later, when we find it mentioned in a charter of 1250-1267 from Adam de Morham to a great grandson of the first Sir Hugh, so well known to readers of "Marmion" as Sir Hugo the Wizard. The first part only of this long charter need be quoted. "I, Adam de Morham, have given and granted, and by this my present charter confirmed to Sir Hugh Gifford for the formation of his park all the side of my wood which is beside the Castle of Yester, with the land and all contained therein as the formation of the said park is designed by Sir Hugh. Further, I give to the said Sir Hugh and his heirs three feet of land beyond the wall of his said park to make a fosse to protect the wall of the said park." Here we see Sir Hugh Gifford laying out and enclosing a park around his castle only recently erected, and, as the present ruined Castle of Yester, as originally built, was a structure of the middle of the 13th century, there need be no hesitation in concluding that it is to this building that Adam de Morham's charter refers.

The lay-out of Yester Castle, as determined by the site, is roughly triangular. Its situation is one of great natural strength for it stands on an elevated promontory which rises with steeply sloping banks above the confluence of the Hopes Water and the Newland Burn, while a broad and deep

moat, still well defined, completes the defence on the south. As elsewhere in Western Europe at this period, the Castle took the form of a courtyard enclosed with strong curtain walls from six to eight feet thick, against the interior of which the various buildings were erected. The great curtain walls have for the most part fallen to the ground, but portions on the north and east sides still stand to a height of forty or more feet, with no openings save a postern door leading out to the point of the promontory which would seem to have been protected by a wall, and beneath which has been excavated the "Goblin Ha'." The approach to the Castle has been from the south where the principal gateway may have been defended by two towers as at Carlawerock.

The road to this gateway is led over the Newland Burn by a bridge certainly older than its parapet walls, in the southern of which is a stone with the date 1717 and the letters M.S.T.—probably standing for Marquis of Tweeddale. To the eastward of the castle bank, standing upright in mid-stream in the Hopes Water, is a huge fragment of dressed masonry which may have been the central pier of an older bridge of the 15th century, for what seems an ancient approach to the Castle from this side may still be traced here. On the north wall above the arched postern can be seen the beam holes for supporting the floors of buildings that once stood along the west side of the courtyard, while opposite these, on the east side, may be traced the foundations of secondary buildings that must have had a lean-to roof, the chases and raggle of which still remain. High up on the west wall a stone basin or piscina with a drain to the outside may locate for us the position of the private chapel of the Castle which we read of in two charters—one dated March 1483, while the other is of the month of November 1507. While detached private chapels are to be found in such castles as Edinburgh and Craigmillar it was more usual to incorporate them with the domestic buildings as here and at Borthwick and Dirleton, where they formed part of one of the living rooms of which one end formed the sanctuary.

But the most remarkable feature connected with the Castle is the subterranean chamber with underground passages leading from it cut in the

solid rock. This is the "Goblin Ha'" which figures so largely in the "Host's Tale" of Scott's "Marmion," and is perhaps the only part remaining of the stronghold erected by Sir Hugh Gifford before 1267. It is reached by a ruinous stone stair leading down from the Castle courtyard. This Hall is roofed with a pointed stone vault strengthened with numerous close-set ribs and seemingly as perfect to-day as on leaving the mason's hand early in the 13th century. It was divided into two stories as one may see from the beam holes at the springing of the vault for supporting the joists of the upper floor. Both floors of the chamber thus divided were entered from the south end by pointed arched doorways, but are otherwise unlighted as they are of course devoid of windows. Immediately within the lower doorway to the right on entering is an arch-headed cupboard of great depth and checked for a door, while the north wall contains a fire-place of early date with corbels and beam holes on either side of it for supporting a sloping hood to carry off the smoke. Adjacent to the larger are two smaller corbels which would serve as rests for what one would think would be much needed lamps.

At the northern end of each of the side walls there is a pointed arched doorway with slots in the ingoings for sliding beams for their defence. The door in the west wall opens into a pointed vaulted passage which leads westwards to the outside and emerges about half-way down the steep sloping bank of the promontory, while the corresponding doorway in the east wall leads to a stair descending to a well sunk in the rock where the sound of running water may be heard. This well is now filled up with stones from the long established custom of pitching a stone to the bottom of the steps, perhaps to dispel any potential or lurking evil before venturing downwards into their Cimmerian depths. The "Goblin Ha'" with its underground rock-cut passages and stairs resembles similar constructions in the castle of Arques near the ancestral home of the Giffords in Normandy. While it might have a variety of uses in time of peace its close association with the vaulted passage to the bank of the stream shows it to have had a military purpose in time of siege—perhaps where men might assemble before sallying out on the enemy, but more likely as a secret means of introducing reinforcements

and provisions. "The 'Goblin Ha' . . . is a unique feature, so far as Scotland is concerned, not yet satisfactorily accounted for. It is clear, however, that there was a 13th century structure on this site, and it is possible that the "Goblin Ha" is the only survival of this, with which it would have been in more direct and obvious relation than it is to the present structure which may therefore really be later in origin as it looks to be." (*Inventory of Monuments in East Lothian—Historical Monuments Commission.*)

The Castle of Yester with its massive curtain walls and its drawbridge across the deep, dry moat in front of its great embattled gateway must have had a very imposing appearance on its isolated height between the two streams to simple-minded country folks who had never seen any other building of stone save the little village churches in their own neighbourhood. The size and strength of the castle betokened the wealth and power of its builder and owner, for Sir Hugh Gifford, after the manner of his family, first in England and then in Scotland, as warriors and statesmen, had always taken a leading part in shaping their country's history. In one of the scenes depicted on the Bayeux Tapestry we see the aged Walter Gifford leading the charger of his kinsman, the Conqueror, at Hastings, and his son, another Walter, was chancellor of the kingdom to the Conqueror and William Rufus. And in Scotland, Sir Hugh Gifford, with Alan Durward, the Bruce, de Vaux of Dirleton, and other powerful barons, was one of the regents for the youthful Alexander III and his young Queen Margaret of England of whose persons they had obtained possession by capturing Edinburgh Castle from the leaders favoured by the people. Save the little village churches Sir Hugh's great walled Castle was the only stone structure for miles around. The only other buildings of a similar kind in East Lothian at that time were the castles of Dunbar and Dirleton, and possibly Hailes, on the track along the coast so soon to become the familiar route of the ruthless English invader.

The dwellings of Gamelston and the now vanished village of Bothans that once lay around the ancient Kirk of St. Cuthbert beside Yester House,

as over Scotland generally at this time, were of timber and made wind and water-tight with clay and daubing. The mansion of their overlord—a timber structure like that of Cedric the Saxon in Scott's "Ivanhoe"—would stand in the centre of the township and the whole would be enclosed by a defensive palisaded earthwork and ditch, for their inhabitants had not sufficient skill to build dwellings of stone. Unlike the great timber and clay mansions of Edolf and Gamel and their Anglo-Saxon predecessors, the stone castles of the Anglo-Normans stood apart from the dwellings of the township and were meant to dominate and overawe all the surrounding district as much as to oppose the progress of an invading enemy, who would hardly often penetrate to such a sequestered valley as that of Yester, for the Anglo-Normans and their retainers as aliens and intruders had not been looked on with favour in the land of their adoption, and there had sometimes been trouble and even bloodshed between them and the native population. The early English chroniclers always speak of the building of castles with a kind of shudder and their erection was resented wherever they were set up. But these great castles provoked the wonder as well as the resentment of the simple-minded peasantry of the district in which they appeared, for their age was one of child-like credulity when what was beyond their experience and intelligence to explain was attributed to magical power and supernatural agency.

The Anglo-Saxon settlers were greatly impressed by the Roman remains they found in England which they attributed to a giant race of old. The Antonine Wall was no less an object of wonder to the early inhabitants of the valley of the Forth and Clyde who called it Graham's Dyke. "Graham" was traditionally a native hero who broke through the Wall, but the word is really the same as "Grim," a fabulous giant to whom is ascribed the construction of great earthworks in other parts of Britain. And this great stronghold of Sir Hugh Gifford, as the earliest of the "stone age" of castle-building in all the surrounding district, with its marvellous subterranean chamber and its underground passages, and as the product of the more advanced civilisation of the Continent brought in by the Anglo-Normans, was something altogether new to their experience. They looked on its erection with

wonder and amazement, and could account for it in no other way than by magical art. To them, therefore, its owner and builder must be one in league with supernatural agents. This deep-rooted conviction of the simple-minded country folk in and around Yester in Sir Hugh's day became a tradition in the district, which has been misinterpreted as a childish fable, but which, on the contrary, in one sense is real history, though unperceived as such by the historian, for it owes its origin to, and commemorates the fact of, the feelings of wonder and dread with which the earliest great stone strongholds were regarded by the rude and ignorant inhabitants of the neighbourhood when they first appeared.

The wonder which such buildings evoked at the time of their erection is a piece of unrecorded history which this tradition to which it gave rise has preserved for us while history itself has passed it by. Adam de Morham's charter to Sir Hugh Gifford shows us clearly to within a few years when Yester Castle was built, and the tradition as to its erection being due to magic power, as we shall see immediately from Fordun's "*Chronicle*," dates from about the same period. Here we see history and tradition confirming one another as to the date of the first appearance of the stone castle in Scotland, and it may be that in our local traditions there are often more traces of historic fact than we have hitherto suspected.

This tradition of the supernatural origin of Yester Castle early found its way into literature. To this cause we owe its preservation to our own day when so many other old-world tales have passed into oblivion and been altogether forgotten. The first notice of it is in the *Scotichronicon* of John of Fordun who died in 1385 or little more than a hundred years after Sir Hugo himself, but we see at once from the words "*antiquae relationes ferunt*," i.e., "*ancient accounts declare*," that the tradition was old even in his time. The entry in the *Scotichronicon* is as follows:—

"A.D. 1267.—Hugo Giffard de Yester moritur; cuius castrum, vel saltem caveam et donjionem arte daemonica antiquae relationes ferunt fabrifactus; nam ibidem habetur mirabilis specus subterraneus, opere mirifico construtus, magno terrarum spatio protelatus qui communiter Bo-Hall

appellatus est" (Lib. X. cap 21); which may be thus translated:—"A.D. 1267.—Hugh Giffard of Yester dies; whose castle, or at least the cave and donjon keep, ancient accounts declare to have been made by demoniac agency; for in the same place there is a wonderful underground cavern formed with extraordinary labour and extending over a great area which is commonly called Bo-Hall." (Book X C.21.)

This passage, however, was not written by Fordun himself who had only completed five books of his Chronicle at the date of his death, but by Walter Bower, Abbot of Inchcolm, his continuator. As a native of Haddington Bower would be familiar with the story of Sir Hugh, the Wizard of Yester, and, as he gazed southwards from the window of the sunny Warming Room of the monks across the gleaming waters of the Forth towards the three Lothians, he would be daily reminded of the scenes and legends of his early years. The story is mentioned by Lord Hailes in his "Annals" and enshrined by Sir Walter Scott in the third canto of "Marmion" where in imagination he brings King Alexander III to Yester in 1263 to consult with its necromantic lord as to how best to repel King Haco of Norway and his Danish warriors from his kingdom. Scott thus describes the "Hall" and its owner.

"A wiser never, at the hour
Of midnight, spoke the word of power;
The same whom ancient records call
The founder of the Goblin Hall.
Of lofty roof, and ample size,
Beneath the castle deep it lies;
To hew the living rock profound,
The floor to pave, the arch to round,
There never toiled a mortal arm—
It all was wrought by word and charm!"

In the poem Scott has, of course, as Shakespeare so often does, taken liberties with history, and transforms historical characters and bends dates and incidents to suit the purpose of his art. In "Marmion" Scott's creative fancy, working on the legend of his necromantic powers, has given us a portrait of Sir Hugh Gifford in his character of wizard and magician

which is quite inconsistent with what we know of his real character as bold and active warrior and wise and prudent statesman who took a leading part in moulding the policy of the country. There is no record of Alexander III ever having been at Yester before 1277, some fourteen years after the defeat of King Haco at Largo. In that year King Alexander dates a letter from Yester to Edward I, but of this letter Sir Walter could never have heard as it lay buried in the English Record Office until long years after his death. Besides the "Goblin Ha'" we have another tangible witness to the necromantic powers once said to have been exercised by Sir Hugo Gifford in the famous Coalstoun pear which had been a family heirloom at Yester from his time because he is said to have cast his spell over it and in this way to have endowed it with the power of conferring unfailing good fortune on whoever possessed it. The pear was given by John, 2nd Lord Yester, as a wedding dowry to his daughter Marion on her marriage with George Broun of Coalstoun, a family in possession there when the Giffords came to Yester. In giving his daughter away Lord Yester is said to have told his son-in-law that so long as the pear continued in his family good fortune would never desert it. From that date until the present day the pear has been treasured at Coalstoun House as a sacred palladium and must, one would think, be the oldest fruit of its kind in existence.

The two periods of Scottish history in which Yester Castle figures most prominently in the national records are the dark and troubled years of the War of Independence against England and the days of Mary Stuart, the stormiest and perhaps the most romantic in our history. Whilst his two younger brothers, as the Ragman Rolls reveal to us, swore fealty to Edward I in 1296 William Gifford, Sir Hugo's eldest son, refused to bow the knee to the usurper. In that same year Sir William Wallace, after the Battle of Stirling Bridge, came to Yester on his way to Dunbar to punish Earl Patrick, who was ever on the side of England. Wallace was joined by Sir Thomas de Morham, and in all probability by William Gifford, and defeated Earl Patrick at Innerwick. We next hear of Gifford in Stirling Castle where he had joined Sir William Oliphant of Muirhouse, now within the Edinburgh city boundary, in his three months' memorable defence of that famous

stronghold against all the might of England led by Edward I himself. Famine forced them to surrender and Gifford was sent a prisoner to the Tower of London with strict injunctions to its Constable "to guard carefully, answering body for body, William Gifford, prisoner from Stirling." With its gallant owner a prisoner in England Yester Castle was held by the enemy all through the war down to the year of Bannockburn. During all these weary years we can follow William Gifford in the English State Papers as he is moved from one castle to another throughout the south and midlands of England and always with an allowance to their Constables for fetters to shackle his limbs. He was a worthy companion to the patriotic Wallace, for, unlike his renowned captain Sir William Oliphant and the other leaders captured at Stirling, he refused to purchase freedom by swearing fealty to the English king. He would be exchanged after the victory of Bannockburn but he did not long survive to enjoy his freedom. He was dead before 1320—a result no doubt of the hardships he underwent in English prisons.

From Adam de Morham's charter of 1250-1267 we gathered that Sir Hugo Gifford had built his castle on the very verge of his domains. This was often done in the old feudal times when might was right, that a powerful baron might seize every opportunity for "brizzing yont" or pressing forward to make acquisitions of territory at the expense of his neighbours. The Giffords did "brizz yont," but it was by the course of true love and marriage and not by the usual lawless methods of those turbulent days, for Sir John Gifford, whose patriotic father had suffered so much in the cause of Scottish freedom, married Eufamia, the only daughter and heiress of Sir Thomas de Morham, his near neighbour. De Morham too had suffered at Edward's hands, for, while fighting by the side of Wallace in the Battle of Falkirk in 1298, he had the misfortune to have his black war horse killed under him when he was made prisoner and sent to the Tower. This union of Sir John Gifford with De Morham's heiress brought the lands of Duncanlaw, Morham and Baro to the House of Yester, an addition to their domain which Robert the Bruce confirmed by charter in 1322.

With the accession of Edward III the English attack on Scotland's inde-

pendence was renewed. Sir John Gifford, like his father before him, supported the patriotic side, and again the Castle of Yester had to suffer an English garrison, but on peace being made in 1335 it was restored to its owner. With Sir John Gifford's son, another Sir Hugh, the male line of the Giffords failed and their extensive domains were divided among Sir Hugh's four daughters in equal portions. The eldest daughter Johanna married Sir Thomas Hay of Locherwort, now named Borthwick after his successors there who still hold it, and to him she brought her share of Yester and of her father's other possessions. By deeds of excambion in 1452 and 1512 the Hays exchanged part of their extensive territories elsewhere for the remaining portions of Yester which had already become the principal seat of the family and their territorial designation.

This union of Sir Thomas Hay with Johanna Gifford was the third fortunate marriage with an heiress in five generations that had brought wealth and fortune to the Hay family. In the first quarter of the 13th century Sir John Hay, by his marriage with the heiress of Locherwort, became possessed of that property which for two hundred years became the territorial title of his family. His grandson, Sir Gilbert de Hay, the friend and companion of Bruce, married Mary, the daughter and co-heiress of Sir Simon Fraser, the companion in arms of Wallace and afterwards of Bruce whose life he saved in the Battle of Methven Wood, while he himself was made prisoner and taken to London to share the barbarities of Wallace's sentence. This marriage brought to the Hays their once broad domain in Tweeddale which John, the first Marquis, had to dispose of, along with the sherrifdom of Peebles, to the Queensberry family through having become deeply involved as cautioner for the debts of his spendthrift kinsman, the 2nd Earl of Dunfermline. And now the marriage of Sir Thomas Hay of Locherwort with the co-heiress of the last of the Giffords added Yester to their already extensive possessions and gave them their territorial title until it was superseded by that of Tweeddale in 1646.

It was no doubt in commemoration of these three fortunate marriages with heiresses that Charles, 3rd Marquis of Tweeddale, composed the following Latin lines which were, however, not original, but adapted from those

of Matthias Corvinus, King of Hungary, 1458-1490, on the acquisitions of the House of Austria in a similar way:—

"Aulam alii jactent; felix Domus Yestria nube,
Nam quae sors aliis, dat Venus alma tibi."

These lines may be thus translated:—

"Let others seek Court influence; happy House of Yester marry,
For what fortune gives to others, kind Venus bestows on thee."

As Yester Castle stood at some distance from the usual routes of the English invader the number of warlike episodes recorded in its story is not numerous, for it was not the object for centuries of menace and attack by English armies like those of Dirleton and Dunbar, but, nevertheless, the Lords of Yester themselves seem to have been associated with most of the stirring events in their country's history. They certainly took their share in most of the fighting against the "auld enemy" of England, and, though Protestants, were stout and loyal supporters of the hapless Queen Mary—standing by her at Carberry and fighting in her cause at Langside. Though life at Yester might be comparatively tame considering the stirring times in which they lived, yet as great Tweeddale landowners, as hereditary sheriffs of Peebles and sometime Warden of the Middle Marches, in their frequent pursuit of Border thieves and raiders as, for example, when Yester's heir was slain by the thieves of Eskdale about 1490, and in their feuds with the Stuarts of Traquair and the bold Buccleuch renowned in Border story for his most brilliant and daring feat of arms in rescuing Kinmont Willie from Carlisle Castle, we see that when on the Borders the Lords of Yester led as thrilling and exciting a life as the most adventurous could wish.

After the fight for Scotland's independence against the three Edwards Yester Castle does not again play any prominent part in the national history until the campaigns of "frightfulness" against Scotland by Hertford to coerce her into agreement with Henry VIII's marriage scheme for her little Queen Mary. During this period Yester was captured by the English, retaken by the Scots, and again lost to the English, but we have no details of the fighting. It disappears from the State Papers with a threat of demolition by the enemy hanging over it, but there is no record of this ever

having been carried out. Be that as it may it seems to have been so much knocked about in the turmoil and strife of its several sieges during the war that a sasine of 1619 speaks of it as "the ruined castle of Yester." It was no longer habitable by the Yester family, and, like their former castle of Neidpath to-day, was from this time employed for housing workers on the estate. In the 18th century it was tenanted by his lordship's falconer until the stair leading to the portion of the castle occupied by him collapsed, rendering access to it no longer safe. Since then time has wrought further havoc and gradually reduced the castle to its forlorn and ruinous condition of to-day.

But of the long centuries of stirring and strenuous life lived within and around its walls—of the executions at its "heiding hill" which once gave its name to a farm now largely incorporated with that of Long Yester, or at its hanging tree, for like other mediæval barons the Lord of Yester had his executioner whose bakehouse and brewhouse in "the Bothans" in 1374 had been long tenanted by John de Leys as by his ancestors before him—of the riding forth to battle, as to Neville's Cross in 1346 and Pinkie in 1547, in both of which its Lord was captured by the enemy and sent to the Tower—of the fighting, as when

"Ancrum Moor

Ran red with English blood,"

and John, 4th Lord of Yester, fought by the side of his uncle, the Earl of Angus, in avenging the outrages and atrocities of Ewe and Latoun and their savage horde—of the slaughter and the "dule and wae" of the return or non-return as from Flodden, when John, 2nd Lord Yester, and those who followed him there, "died in the field in Northumberland under the King's banner," and masses for their souls' weal were sung at the altar of the Holy Cross in the Kirk of Bothans—not a memory remains in the district to-day. All has been forgotten save the legend of Sir Hugo the Wizard, who "spoke the word of power" that summoned to his side the dread artisans of fiendish race who under his spell laboured with so much clamour and affray in the building of the "Goblin Ha'."

JOHN RUSSELL.

HISTORICAL NOTES OF PLACES VISITED BY THE SOCIETY.

This series of Notes, which was begun in last year's *Transactions*, has now been brought up to date. As, however, it is proposed to have an article on the churches of St. Mary and St. Martin, Haddington, in the *Transactions* for next year, these buildings have not been dealt with under the above heading.

For particulars in regard to the principle on which the Notes have been prepared reference should be made to the statement in last year's *Transactions* (p. 131).

PARISH CHURCH OF WHITEKIRK.

Visited 17th July 1926. *Leaders*:—Rev. J. T. SOUTTER, M.A., and Mr
JAMES S. RICHARDSON.

Of all the ancient parish churches of Scotland probably none is better known than Whitekirk. The story of its founding is obscure, but legend has it that a church having its origin in the Mission of St. Baldred was founded at Aldhame at a very early date. The church of Hamer was granted to the Abbey of Holyrood by David I. The original charter is not extant but the church with the lands of Hamer and Ford is mentioned as the gift of King David to the Abbey in a charter of confirmation by Robert, Bishop of St. Andrews, granted about the year 1130. Hamer had a well of water springing up from the rock which was considered to have such miraculous virtues that great numbers of pilgrims came to drink of it.

There is in the Vatican Library a document which professes to give an account of Whitekirk since 1294, but, as the document was obviously written after the Reformation, and no authorities are given for the statements therein

contained, its evidence, although interesting, cannot be accepted without reserve. This document attributes to Black Agnes of Dunbar the erection at Fairknowe (the name of the hill behind the present church) of a chapel and chantry in honour of the Virgin Mary, in gratitude for a cure received at the holy well. Fordoun and later Bower state that when in 1356 Edward III was invading Scotland, an invasion familiarly known as "the Burnt Candlemas," English sailors landing on the East Lothian coast and finding their way to Whitekirk caused much destruction to the chapel and plundered the great treasures which were in it at that time. In the 15th century the fame of the church and the holy well had become very great, and the Vatican document above referred to states that in 1413 the pilgrims to the shrine, which had been erected in the previous century, numbered 15,658. Perhaps the most distinguished visitor to the shrine was Aeneas Sylvius Piccolomini, afterwards Pope Pius II, who made a pilgrimage there in the winter of 1435. He has fortunately left a record of his visit. The Cardinal of Santa Croce had sent him on a mission to James I, but, as he was denied a passport through England, he had to take ship from Sluys in the Netherlands. In crossing the North Sea he encountered such a great storm that he made a vow that if he got safely to land he would make a pilgrimage on foot to the nearest shrine of the Blessed Virgin. In fulfilment of that vow he walked with bare feet on frozen ground from his landing place on the Firth of Forth to Whitekirk, a distance of 10 miles. James I of Scotland, if the Vatican account can be trusted, took such a great interest in Whitekirk that he built houses for the accommodation of the pilgrims. James IV often made pilgrimages to the chapel, and the Lord High Treasurer's accounts of expenses for his journeys record offerings at the shrine and gifts to the poor and to lepers. It would appear that in the 16th century there was much falling off of pilgrimages, for in 1537 James V gave orders to pull down the pilgrim houses and allowed his favourite Oliver Sinclair to build a house for himself with the stones.

The existing church of light red ashlar appears to have been built in or about the 15th century. It is cruciform in plan and has a massive central tower. The nave, which is unaisled, measures $50\frac{1}{2}$ feet by $22\frac{3}{4}$ feet and the chancel $38\frac{1}{2}$ feet by $20\frac{3}{4}$ feet.

After the Reformation, Auldham and Whitekirk were united and the chapel was used as the church of the parish. As time went on various structural alterations took place in the interior. In 1691 an elaborate family pew for the Bairds of Newbyth was erected on the site of the altar. In the first quarter of the 18th century it was considered by the Minister at that time that there was sufficient accommodation for the parishioners in the chancel, and a wall was built across the church completely dividing the chancel from the nave, the pulpit being placed on the east side of that wall, facing the Newbyth pew. The nave was meantime left vacant, but a few years later was converted into the parish school. This arrangement continued till 1760. In that year the Minister of the parish of Tynninghame died, and it was arranged to combine the parishes of Tynninghame and Whitekirk and to have the services in the latter church. The partition wall was then taken down. The people of Whitekirk continued to sit in the chancel looking west, while the Tynninghame parishioners sat in the nave looking east, the pulpit being placed against the south wall. The Earl of Haddington's family pew was brought from Tynninghame Church in 1762 and placed in the north transept. As the laird of Seacliff had no pew there was added to the church in 1832 the aisle to the north of the nave in which was built a gallery which has been described as resembling a large Dutch cabinet. The arcaded wooden front of the north gallery of 17th century workmanship was said to have been brought from Tynninghame Church.

In the condition above described the church remained until about 4 o'clock on the morning of 26th February 1914, when it was discovered that it was on fire. By the time that any help was available, the flames had got such a hold that nothing perishable could possibly be saved. There was unmistakable evidence that the origin of the fire was the act of incendiaries. Prompt action was taken to ascertain the state of the masonry and the possibility of restoration, and the late Sir Robert Lorimer, K.B.E., A.R.A., R.S.A., and Thomas Ross, LL.D., were asked to make an inspection and to report. They reported that the masonry of the tower and the turret stair up to the belfry had escaped with comparatively little damage, but that the supporting piers, arches and groined roof of the tower, built in ashlar masonry, were

badly calcined and the spire totally destroyed. The ashlar walls of the chancel, which were about 4 feet 6 inches thick, were badly calcined up to the springing of the vaulted roof. The vaulted roof, as far as could be judged without scaffolding, did not appear to have suffered much. About 2 feet away from the tower there was a wide rent extending up to the vault from side to side. All that remained of the transept and nave were the bare walls, badly damaged on the surface by fire. The whole of the stone window tracery was gone or ruined. The stone-work of the entrance porch had practically escaped damage, but the timber roof was completely wrecked and was lying on the top of the vaulting.

The treasures destroyed were many, including communion table, font, pulpit, organ, fine chairs of William and Mary period which were in the Earl of Haddington's loft, lectern, with the precious old Bible that lay on it, a beautiful specimen of black-letter, the Old Testament printed in 1611 and the New in 1617. It had been the pulpit Bible of Tynninghame Church and had been the gift of John Murray, afterwards Earl of Annandale. The alms dish of pewter was recovered slightly damaged, and is again in use.

An influential Committee was formed to take steps towards the restoration of the church, and although the country was then still in the throes of the Great War, so great was the regret at the destruction and the desire to restore, that by the following year the work was proceeding under the supervision of Sir Robert Lorimer, and on 18th October 1917, the building was re-opened for worship by the Very Revd. Professor James Cooper, D.D., Litt.D.

The chief facts in regard to the reconstruction of the church may be stated as follows:—

The nave, roof and the west gable, which in modern times had been brought down to a comparatively flat pitch, were raised to their original height. The old lichen-covered Angus slates which were formerly on the roof were replaced as far as possible, and to make up the deficiency, old ones of a similar character were collected. The gable of the south transept was

rebuilt in complete sympathy with the rough character of the masonry and finished with crowsteps, like the mediæval porch and east gable. The tracery in the south east window of the chancel remained, while that of the rose window in the east, though badly damaged, was restored. In the restoration of the other windows, the choir window was taken as a model.

The changes within the building are more marked than those without. As the sandstone arches of the tower showed great cracks and their removal would have been dangerous, new arches were built within the old ones, and the piers faced with new stone, carefully bonded into the old piers. Liquid cement grout was then forced by hydraulic pressure into the old masonry above the new arches. The walls of the nave were covered by a plaster having a rough texture and finished with white-wash, but no attempt was made to reface the walls of the choir. The roofs of the nave and transepts were finished in Scotch oak boarding divided by moulded ribs with carved bosses at the intersections. The galleries have not been re-erected. The space formerly occupied by the Seacliff gallery is now known as the Seacliff Aisle, and the four-light window of stained glass in it was the gift of Mrs Laidlay. The choir, which formerly contained the Baird pew, has now been restored to its proper use. The south transept has a small trefoil window in the gable which has been filled with stained glass by Carl Parsons, the gift of the late Revd. Dr Hatcly Waddell. The quatrefoil window at the end of the choir has been filled with stained glass by Sir James Balfour Paul, C.V.O., LL.D., late Lord Lyon King-of-Arms, in memory of his brother, a former Minister of the parish. The communion table and font, both made of similar stone to that of the building, are the gift of the Earl of Haddington and his family, in memory of the late Brigadier-General George Lord Binning, C.B. The pulpit is of Scotch oak, richly carved, and was the gift of the Revd. Edward B. Rankin, the Minister of the parish at the time of the occurrence of the fire. In the words of the Minister it may be said that "the building has not only risen from its ashes, but has regained much of its pristine beauty, which was so rudely marred by the architects of the 18th and early 19th centuries."

In removing a modern plaster ceiling from a room on the first floor there was discovered a beautiful painted one above it. As Mr Hay had for a long time entertained an idea that there existed an original ceiling of some kind above the modern one, the work of taking down the latter was carried out with great care; and, as the result of this careful treatment, it soon became evident that a fine work of art had been saved to Nunraw and the County. This ceiling the members had the pleasure of inspecting. Strong oaken joists span the room cross-ways to its length, the intervals between the joists being filled in with long wooden boards or panels, extending over the entire breadth of the room. The whole exposed surfaces of the joists are decorated with a running ornament in a variety of colours, but it is the spaces between the joists which afforded the artists the greatest scope. Here there is a wonderful profusion of coloured ornament, including representations of beasts, birds, fruit, musical instruments, and many other things, together with shields bearing a variety of royal arms. In describing the ceiling Colonel Gray mentioned that, while the paintings had been considered by some authorities to be Italian work of the 17th century, he could not agree with that view. He believed them to be 15th century work, as, indeed, in one place the ceiling bore the date 1416; and the fact that the arms on most of the panels are those of kings of countries in Spain, such as Aragon, Navarre, and others, pointed, he felt, to strong Spanish influence at the convent, and the probability that the paintings were the work of Spanish artists. He added that in this view he was supported by well-known experts in heraldry, who, along with him, had examined the ceiling. A coloured drawing of the ceiling, by Mr Thomas Bonnar, is reproduced in the *Sketch Book of the Edinburgh Architectural Association*, 1875-76.

In 1903 a very interesting discovery of ancient graves was made in a field which lies on the top of the right bank of the burn flowing past the village of Garvald and exactly opposite it. Twenty stone coffins were found, each containing a perfect female skeleton, all in a position which showed that the bodies had been laid on their right side, with the head to the west and the feet to the east. The late Sir William Turner, M.D., then Principal of Edinburgh University, and Professor Daniel J. Cunningham, made an examination of

the skeletons and drew up an interesting report, which they sent to Colonel Gray. An account of this discovery will be found in the *Proceedings of the Society of Antiquaries*, 1905-1906.

It should not be forgotten that Nunraw has a very strong claim to be recognised as the "Ravenswood" of Sir Walter Scott's "Bride of Lammermoor." Captain Craigengelt's reference, in his conversation with Bucklaw (chap: xx) in regard to the rumour of the coming marriage of Lucy Ashton to the Master of Ravenswood, to the effect that "nothing else is spoken of betwixt Lammerlaw and Traprain," is regarded by many as pointing to this ancient house. In support of this claim Colonel Gray said that he had been told, on good authority, that an old lady who lived at Gifford used to say that Sir Walter for some little time lodged with her grand-aunt in that village when he was writing "Marmion," and that in the forenoons he went to Goblin Ha' and in the afternoons invariably took long walks in the vicinity of Garvald.

For a fuller description of the architecture of the building reference should be made to the *Inventory of Ancient Monuments* for the County. The very fine essay by the late Mr David Croal in *Sketches of East Lothian*, giving particulars in regard to the restoration of 1863-64 and the finding of the painted ceiling, should also be consulted.

PRESTON.

Two visits were made to this locality. The first was under the leadership of the late W. B. Blaikie, LL.D., the well-known authority on the '45 Rising. It took place on 20th September 1924, and was for the special purpose of going over the ground on which the Battle of Preston was fought on 21st September 1745. The second was under the leadership of Mr J. S. Richardson. It took place on 21st September 1929, and had for its object a return visit to that part of the battlefield on which the thorn tree after referred to is situated, and visits to Preston Tower, Preston Cross and Northfield House.

First Visit.—While no detailed account of the battle can be entered into here, a few outstanding points referred to by Dr Blaikie may be set down.

Sir John Cope reached the battlefield early in the afternoon of 20th September 1745, having left Haddington in the morning. Prince Charles left Duddingston that morning, and reached the high ground west of Tranent shortly after Cope had arrived on the lower ground between Tranent and the sea. All Cope's operations took place in the field which lies N.W. of the west end of Meadowmill hamlet. From the west end of the hamlet runs northward a path which at the time of the battle was a tram way used for carrying coal to Cockenzie harbour (this should not be confused with the road running from the east end of the hamlet), and all Cope's movements were to the west of this tram way. Cope's first formation faced westwards. When Prince Charles was seen at Tranent a position facing south was taken up, but when what appeared to be an attempt to turn Cope's right flank was observed, a position facing south-west was assumed. This threat being removed, a position facing south was again adopted for the night, but just before dawn on the 21st the Highlanders were heard approaching from the east, and Cope in consequence hurriedly changed front to face east. This position was formed within a few yards of the line of the tram way.

Meanwhile the Highlanders had left Tranent moving eastwards; they then bore north through Riggonhead Farm, crossed the morass (which then occupied the present position of the railway) by a little-known path, and formed up facing west about 250 yards west of Seton Castle. As soon as they were in line they rapidly advanced westwards to attack Cope, reaching his lines just as the beginning of daylight came. Cope's troops at once broke and fled. Most of the cavalry escaped, some to the north and some to the south of the high wall (much of which still stands) bounding what were then the gardens of Preston House. But this wall was fatal to most of Cope's infantry. The Highlanders in pursuit caught them before they could climb over it, and at this wall some 1600 of them were killed or taken prisoners. Of Cope's infantry less than 200 escaped.

Leaving Prestonpans Station, the members of the Society walked up the road leading south below the railway bridge to the main Edinburgh-Tranent road. With the exception of the last part (for which a short cut was taken) this was the route taken by most of Cope's survivors in their retreat after the battle. From the main road the whole battlefield was seen, and the landmarks were pointed out, Dr Blaikie exhibiting for the benefit of his audience a number of old prints and maps. The party then walked into Tranent and down to the churchyard, where the Highlanders had posted a small detachment in the afternoon before the battle. This detachment was driven out by fire from two of Cope's small guns. To the manse, which still stands on the south of the churchyard, Colonel Gardiner was carried after the battle, and died there in a room in which there is a brass plate recording the event. He was buried on the west side of the old church (demolished 1797; present church opened 1801), but his burial place is included in the site of the new church, and no stone marks his grave.

The party then followed the old road to Meadowmill and visited the remains of the old thorn tree which was standing there at the time of the battle and near which tradition says Colonel Gardiner fell wounded. At one time in living memory the tree had three limbs, but on the occasion of this visit only one remained, and it was dead.

Second Visit.—On this occasion the thorn tree was visited first, and Mr Alex. Burnett, in the absence of Major Baird, gave a clear and concise account of how the dead and blackened stump which the members saw before them had a special interest in connection with the history of the battle. It marks the spot not only where Colonel Gardiner fell but where the fiercest of the fighting took place, and although it is the remains of the identical tree which was there in 1745 its surroundings are now very different. It is not easily seen from the Mid Road and is about 150 yards distant between a service roadway and a colliery waggon lye. Thirty or forty years ago, he said, the tree was alive and had three limbs.

Mr Richardson thereafter entered into a very full description of the whole

movements before the battle and of the battle itself, and dealt with the question of a memorial to be placed there. It was resolved that the matter of the memorial should be left to the Council.

The party then visited the old tower of Preston, the property of Mrs Fraser. Preston was in the possession of one of the oldest cadet branches of the house of Hamilton from the later part of the 14th century, and the tower, with the exception of the two upper storeys, was built in the 15th century. It continued in the hands of that family till 1682, when it passed from Sir William Hamilton, the first Baronet, to James Oswald, Merchant, Edinburgh, his cousin and brother-in-law. When the Earl of Hertford invaded Scotland in 1544 both the village and the castle were burned. The upper two storeys of the tower were built by Sir John Hamilton about 1625. In 1650, however, the castle was burned by Cromwell's forces. As at that time the charter chest was also destroyed, a new charter was obtained by Sir Thos. Hamilton in 1663, but in that very same year the castle was burned for a third time—on this occasion by accident. It was never occupied or restored after that and since then has remained a ruin.

The tower is L shaped, and, including the 17th century addition, stands 67 feet in height and measures 34 feet from north to south and 39 feet 6 inches from east to west. The walls of the main block are 6 feet 9 inches thick and those of the wing about 4 feet thick. The entrance is on the east side. The basement is barrel-vaulted and lighted by narrow window-slits. The hall above the basement is ceiled with a semi-circular barrel-vault, and in this hall there is a fragment of what must have been a beautiful 15th century fireplace.

Entering the market garden of Mr Wm. Wright, a visit was made to Preston Cross. This cross was at one time the centre of the old village of Preston. Markets were held round it twice a week, and the Fair of St. Jerome took place there annually in October. It also formed, from the 17th century, a special meeting place of the chapmen of the Lothians. Standing as it now does in the midst of a market garden, it is difficult to associate it with the daily life of a village, but it has been kept by the consecutive pos-

sensors of the ground in excellent preservation. It dates from the early 17th century, and consists of a drum of masonry from which rises an oval sectional shaft surmounted by a unicorn supporting a cartouche. The drum is divided vertically into eight panels or compartments by pilasters. Each panel contains a niche. Two of the niches form doorways, one leading to a small dome-vaulted chamber on ground level, while from the other a narrow stair ascends to a platform within the parapet. On the parapet above every pilaster is a socket to hold a flagstaff.

The company then visited Hamilton House, which stands at the angle formed by the West Loan leading to Prestonpans and the high road. Viewing it from the high road, the dormer windows commanded admiration, the pediments being elaborated and having horizontal cornices. The middle pediment bears the date 1628. The courtyard to which entrance is gained from the West Loan shows a fine elevation including the original entrance, which, however, is now built up. Internally the house is completely modernised, but the ground floor chamber of the main east wing still contains a large 17th century fireplace.

The excursion terminated with a visit to Northfield House, the property of Miss McNeill. This fine old house, with old-world garden, is situated on the south side of the road towards the west end of Preston village. It was once the residence of the Marjoribanks of Northfield, to which family, Mr Richardson remarked, the late Revd. George Marjoribanks of Stenton and the late Revd. Thomas Marjoribanks of Prestonkirk belonged. The building is of late 16th or early 17th century construction. L shaped in plan it has two storeys and an attic and garret. The entrance has a moulded Renaissance architrave on which are the words—EXCEPT THE LORD BVLD INWANE BVLDs MAN. The building measures $37\frac{1}{2}$ feet along the west wall by 74 feet along the south wall, the walls varying from $2\frac{1}{2}$ feet to 4 feet in thickness. The re-entering angle in the north contains a comparatively modern turret, within which is a geometrical stair. The turret probably replaced an earlier and smaller one, containing a wheel stair with a solid newel. The original entrance was through the turret but is now disused. The south entrance admits to a lobby

west of and entering from which are two inter-communicating cellars. The kitchen and cellars have semi-circular barrel-vaulted ceilings. The upper floors are modernised. On the first floor of the main wing is a finely painted ceiling of timber in the dining-room, concealed by a modern plaster ceiling. The upper landing of the staircase has a "honeycomb" paving beneath the modern floor.

For full particulars in regard to Preston Tower, Preston Cross, Northfield House, and Hamilton House, consult the *Inventory of Ancient Monuments* for the County, and Macgibbon & Ross's *Castellated and Domestic Architecture of Scotland*.

TANTALLON CASTLE.

SINCE the formation of the Society three visits have been made to this castle. These visits took place on 19th July 1924, 18th July 1925, and 22nd September 1928. The leader on the first and third occasions was Mr J. S. Richardson. He was also to have been the leader on the second occasion, but owing to his inability to be present, Mr G. P. H. Watson, Architect to the Ancient Monuments' Commission, kindly took his place.

On all three occasions the parties were conducted round the whole building and very full information was given both as to its history and structure. It is obviously impossible to give an account of each address, but the following is a brief summary of the chief facts related.

The bold promontory on which Tantallon Castle stands, with practically unscaleable cliffs rising to 100 feet in height, is washed by the sea on three sides and protected on the landward side by a series of earthworks. Mr Richardson remarked that the site was such as would have been selected as a strong point by the fort builders of the early iron age, but that any evidence of such a construction, if it existed, had long since disappeared,

traces only remaining in the Celtic origin of the name. Whatever strongholds existed on this site previous to the 14th century, the greater part of the present structure is regarded as belonging to the end of the 14th or the beginning of the 15th century.

The ground on which the castle stands is marked as a castellated site in a map believed to be dated as before the year 1300, but no part of a 13th century castle has been discovered. It would appear that the earliest historical reference to the castle is in the period at the end of the 14th century when it was held by William I, Earl of Douglas, tenant of the Earl of Fife. The 8th Earl of Douglas was assassinated by James II in 1452, and the castle was granted to George Douglas, Earl of Angus. On the forfeiture of the 6th Earl of Angus in 1528 there followed the siege of the castle by James V, who was present in person. It was held by James until his death, after which Angus was reinstated. When Cromwell invaded Scotland it was held by the Crown as a base of attack on Cromwell's communications until it was taken and dismantled by Monk in 1651. The destruction carried out by Monk finished the history of the castle as a stronghold, and thereafter it appears to have been used simply as a residence. It remained habitable till 1699 when it was purchased by Sir Hew Dalrymple, Lord President of the Court of Session, after which the building was allowed to fall into ruin. The lands and castle are still in the possession of the descendants of this family, the present owner being Sir Hew Hamilton Dalrymple, Baronet.

The castle is of the courtyard type and resembles in many of its features the great 14th century chateaux of France. It has three towers—the Mid or Gatehouse Tower, the East Tower and the Douglas Tower. On each side of the Mid Tower, with its massive front elevations, there extends a curtain wall about 50 feet in height, terminating at one end in the East Tower and at the other in the Douglas Tower.

The apartments were originally floored with wood and furnished with garderobes. These apartments were entered from turnpike stairs in the curtain walls, the tower heads being furnished with corbelled and embattled parapets,

and flat roofs on which guns or cannon, after the introduction of artillery, were placed. The northern side of the courtyard is occupied by the ruins of a range of buildings which accommodated the hall, kitchen, bakehouse and offices. On the southern side it is evident that the intention was to construct a curtain wall carried to the height of the third floor level of the East Tower, but this scheme was never carried out. On the seaward side recent excavations have exposed the remains of a 14th century building which contained the sea-gate. The Mid Tower is over 70 feet in height and accommodated five storeys, each consisting of a large chamber. The ground floor had a vaulted entry, on the south of which was a guardroom, and on the north a vaulted trance leading to the stairway. The great entrance doorway was protected by a pit draw-bridge and portcullis. The Douglas Tower contained a dark vaulted pit prison above which were chambers with garderobes, rising 6-storey high. The East Tower, which suffered much by artillery fire, is one storey less in height than the Douglas Tower, and, like it, was originally floored with timber. During the 16th century vaults were introduced in place of wood flooring. Attention was drawn to the green stone abutting on the red on the walls of the castle, and it was explained that when James V took the castle in 1528 his engineers strengthened the walls by filling up the holes with this stone. There is a series of outworks defending the landward approach, the outermost ditch and rampart being some 200 yards from the castle. Mr Richardson was of opinion that this ditch was probably a counter work made by an attacking force.

Mr Richardson dealt with the excavations which had recently been made on the cliff face and said that those practically opposite the main entrance were revealing massive walls of an early date and of considerable interest. He directed attention to a flight of steps a few yards to the north of the East Tower which descended to the cliff face. During the excavations some articles of interest had been unearthed, including an iron key of late 14th century design, found near the outer gate, shards of mediæval pottery, culverin shot and pipe heads of the 17th century. In the castle grounds there is a 17th century dovecot, containing two chambers.

Sir Walter Hamilton Dalrymple who held the property from 1888 to 1920 did much to preserve it from falling into further ruin. He opened out the staircases and excavated the well and the prison, and it is largely due to his work that so much of it remains to-day.

The castle as it was forty years ago is described in Macgibbon & Ross's *Castellated and Domestic Architecture of Scotland*, while the very detailed description, with plans and illustrations in the *Inventory of Ancient Monuments* forms an excellent record of what it is at the present time.

DIRLETON CASTLE.

Visited 18th July 1925.

Leader:—Mr G. P. H. WATSON.

MR Richardson was to have led the party, but owing to unavoidable absence, his place was taken by Mr G. P. H. Watson, Architect to the Royal Commission on Ancient Monuments of Scotland, who wrote the notes on this castle for the East Lothian volume.

The castle is situated on a rocky eminence in the midst of an old-world garden close beside the village of Dirleton. Probably the first mention of a stronghold in this place was in or about 1225, when the land was in the possession of the old family of De Vaux, who settled in this district in the 12th century. When Edward I was carrying on war in Scotland in 1298, the castle was occupied by the Scottish troops, and their operations were so harassing to Edward that he sent Anthony Beck, the warrior Bishop of Durham, to take the castle. The first attack failed, but a later one was successful, and thereafter till at least 1311 it was in the hands of the English. In the 14th century it passed from William De Vaux, through his daughter, to John Halyburton, her husband, and the Halyburtons held it until early in the 16th century. From the Halyburtons it passed by an heiress to her husband's family, the Ruthvens, afterwards Earls of Gowrie. They were dispossessed

after the "Gowrie Conspiracy" in 1600. Sir Thos. Erskine, afterwards Earl of Kelly, was their successor, and was succeeded in 1631 by Sir John Maxwell of Innerwick, afterwards created Earl of Dirleton. In 1650 the castle was used as a base of operations against Cromwell's communications until Monk succeeded in taking and dismantling it. In 1664 Sir John Nisbet, afterwards a Judge of the Court of Session under the title of Lord Dirleton, purchased the property, and it has been retained by his descendants, being now in the possession of Lieut.-Colonel J. P. N. Hamilton Grant, D.S.O., of Archerfield and Biel.

The building is an imposing ruin of 13th century type, with modifications introduced in the 15th and 16th centuries, the original plan being a walled enclosure with towers at the angles. The structure is too large and complex to describe here, and reference must therefore be made to the very detailed description of it in the *Inventory of Ancient Monuments* for the County. That description is accompanied by excellent photographs and plans. A few of the principal details may, however, be stated.

The buildings of the 13th century are grouped round a small triangular court and are intact, except on the north where a 16th century structure is imposed on old foundations. The stones used in the 13th century masonry are a fine-grained, hard, white sandstone, and a similar tinted but much softer stone resembling that from Gullane Quarry. The principal building of that group is the great drum tower on the south which has an exterior diameter of 36 feet and contains on the ground floor a rib-vaulted chamber, with walls about 10 feet thick. A very fine photograph of that is shown in the *Inventory of Ancient Monuments*. The curtain walls of this old part show various entrances, but the main entrance is on the south of this block and is probably 15th century work. The southern face of the site, in which is set the main entrance, is strengthened by a dry ditch cut in part through the rock. This was spanned by a bridge—probably of wood—supported on stone piers which still remain in the ditch. At the castle end would be a draw-bridge of timber. Mr Watson said that from recent excavations it had been proved that the 13th century wall ran inside the 15th century one.

The eastern range of buildings is mainly of 15th century structure, the lowest storey of which seems to have contained cellars and a prison, while the upper was a hall and kitchen with a room, which, although bearing traces of having been a living room, bears evidence also of having at some time been used as a chapel, as it contains a piscina, a credence recess, etc.

To the west of the castle there is an area of some 80 or 90 square yards which is enclosed by an earthen mound planted with old yew trees. It had apparently been a bowling green. There is also about 30 yards north of the castle a dovecot of 16th century structure incorporated in a modern boundary wall. It is circular in plan, 21 feet in diameter and some 25 feet high. The height externally is divided into four tiers by horizontal string courses; a moulded billet course characteristic of the period returns round the wall head.

At the time of the visit scaffolds were being erected by H.M. Office of Works with a view to preserving what remains of this historic building.

CONVENT OF CARMELITE FRIARS AT LUFFNESS.

Visited 12th June 1926.

Leader:—Mr J. S. RICHARDSON.

THE Carmelite Friars are said to have arrived in Scotland in the latter half of the fourteenth century. There is no record extant of the founding of their Convent at Luffness, but the interesting fragment which remains in the policies of Luffness House may be assigned to that period. At the time of the visit the remains of the church were undergoing excavations and repair. The building conforms to the plan peculiar to Friars' churches, and consists of two apartments connected by a narrow doorway, the western being the nave and the eastern the choir and sanctuary. The conventual buildings have long since disappeared, but their foundations still exist under the soil on the south side of the church, and cover a considerable area of ground.

The clearance of the floor in the choir and sanctuary has exposed the remains of stone paving, and the socket for the lectern. The choir and sanctuary measure 48 feet 7 inches by 20 feet 2 inches, the sanctuary being elevated two feet above the choir. Traces can be seen of a sacristy to the north of the choir. The nave measures 43 feet 8 inches by 20 feet 2 inches. It will be observed that the choir and sanctuary, as being the place of worship for the members of the order, is larger than the nave which was set aside for the laity. Immediately in front of where the high altar stood there is a monumental slab bearing the Hepburn arms and the inscription in Gothic characters *HONORABILIS VIR KENTIGERNUS HEPBURN . . . DE WAUCHTOUN*. This man is supposed to have been the son of Patrick Hepburn who obtained the lands of Luffness from William de Bekirtoun in 1464. There is an arched recess in the north wall of the sanctuary containing a stone coffin, covered by the recumbent stone effigy of a knight wearing a surcoat over armour apparently of mail. A heater-shaped shield rests on the body. An interesting relic of stone, having the upper face cut with a rowel-like design within a circular margin, was pointed out as being a stone lamp of mediæval date, commonly called a cresset. In the immediate vicinity are the remains of two fish ponds.

David II was a benefactor of the Convent. In 1609 the Crown granted the lands and buildings to Robert Hepburn, younger, in Over Hailes, who in 1618 disposed them to Patrick Hepburn of Wauchtoun.

Thereafter the party viewed Luffness House and the well-defined earth-works which surround it. They are understood to represent the fort constructed for the French commander De Thermes in 1549, when the English held Haddington.

HAILES CASTLE.

Visited 21st July 1928.

Leader:— Mr J. S. RICHARDSON.

Mr Richardson, in the first place, explained to the company that up to the

end of the 12th century and well into the 13th century there were no stone castles in this country. What was up to that time known as a castle was very different from the structures of mason work which obtained after that time. First of all there was a mound of earth, either a natural mound pared down or an artificial mound, called a motte. The mound was surrounded by a ditch. On the top of the mound was a square tower of wood and on one side of it, or set round about it, was an enclosure with earth-work round it, and pallsading of wood. Outside that ring again was the bailey, an enclosure surrounded by a peel and a ditch, and beyond that they had an arrangement of brushwood resembling the barbed wire obstacles put up during the late war. The invaders attacked with great flares in order to burn the timber down. Later a stone tower was substituted for the wooden one, and the motte and bailey gradually developed into the "shell" type of larger castles. There are not many examples of 13th century stone castles in Scotland, but East Lothian is fortunate in possessing three, namely, Dirleton, Yester, and Hailes.

Hailes Castle is on the right bank of the river Tyne about a mile and a half from East Linton. Although much of the building has disappeared, there are still left massive curtain walls and two towers. The 13th century wall, the great 14th century north-west tower and the 13th century mid-tower, all abutting on the river, have a striking effect when viewed from the river or the opposite bank. The fragment of curtain wall extending from the north-west tower towards the south contained an entrance, and in recent excavations the ditch immediately outside was found to be 18 feet deep. There are two prisons, one in the 13th century tower and the other in the 14th century one. There was also discovered a mediæval oven which is constructed of marine stone of the type found at Tantallon, Dirleton and Edinburgh Castles.

It is difficult to say who the original builder was. As already stated the earliest work is of the 13th century, and it was not until the 14th century that the great family of Hepburn was associated with the building. The question is, how much of the masonry work belonged to the previous owner,

Hugh Gourlay. The castle had associations with Mary Queen of Scots and James Hepburn, 4th Earl of Bothwell, who eventually died in Denmark and was buried there. It subsequently passed into the hands of the Earls of Winton; afterwards to the first Viscount of Kingston, a cadet of the House of Winton, from whose creditors it was purchased in 1704 by Sir David Dalrymple of Hailes. It remained in the hands of the Dalrymple family all through the 18th century and well into the last century until it was purchased by the Earl of Balfour.

TYNINGHAME.

Two visits have been made to Tynninghame, the first on 17th July 1926 under the leadership of Mr J. S. Richardson, and the second on 20th July 1929 under the leadership of Mr John Russell. These visits were for the purpose of viewing the site of the original village of Tynninghame, whose remains lie buried beneath the green sward, and the ruins of the ancient church in which its inhabitants for so many centuries used to worship. On the occasion of the first visit Mr Richardson described in most interesting detail the small portions of the Norman Church which still remain and explained very clearly the nature of the ornament on the very beautiful arch of the apse.

Of the church founded by St. Baldred, who lived and died here, nothing of course now remains. The ruins as they stand are all that is left of the beautiful Norman Church built in the middle of the 12th century, which, with its apse, choir, nave and western tower, must have resembled the old Norman Parish Church of Dalmeny. Details of the structure are given in the *Inventory of Ancient Monuments* for the County.

On the occasion of the second visit, Mr Russell, besides reminding the members of the main points of interest in the ruin, gave an illuminating address on the history of Tynninghame, in which he explained that from the

churchyard surrounding the ancient church to the rising ground to the west of the present mansion-house stretched the main street of the older village of Tynninghame. Of this village we have no knowledge beyond what we gather from its Kirk Session Records. In these old minute-books, despite the zealous labours of its faithful pastors, we find that this older Tynninghame required to have two pairs of joughs—one at the churchyard porch and another at the village cross, of which cross not a vestige now remains.

The inhabitants of this older Tynninghame, whose doings, and more especially their misdoings, are so faithfully set down in their parish records, continued to worship in their Norman Church until 1761 when their parish was joined to that of Whitekirk, whose church of St. Mary then became the place of worship for the united parishes. At this time Thomas, 7th Earl of Haddington, resolved to carry out a scheme suggested by the Earl of Mar who led the '15 rebellion in favour of the exiled Stewarts. This scheme included the removal of the old village and its beautiful Norman Church which stood within a stone's-throw of the mansion-house to another site outside the park. The village was removed to its present site and the church, after being dismantled and its monuments in great part destroyed on the union of its parish with that of Whitekirk, was never rebuilt. Two fine arches only of the church were left—the space between them being the burial-place of the Haddington family.

An interesting and enjoyable feature of the second excursion was a visit to Binning Woods under the leadership of Mr George Snowie, the factor of the estate. The story of the planning and formation of the Woods was told to the company as they rested under the shade of some of the very fine trees, and thereafter a walk was taken in one or two of the beautiful avenues. Part of the ground now occupied by the Woods was at one time known as the Muir of Tynninghame. The planting was begun in 1705 by Thomas, 6th Earl of Haddington, by the desire of his wife, a sister of the 1st Earl of Hopetoun, and later additions combined to make Binning Woods, as they were originally named, a natural feature of great beauty to the county.

WINTON HOUSE.

Visited 26th September 1925. *Leader*.—Mr GILBERT F. M. OGILVY, the Proprietor.

The party was received by Mr and Mrs Ogilvy, the former of whom gave a short account of the history of the building, in the course of which he explained that the original Winton House, as it was called till the latter part of the 18th century, was erected about 1500 by George, 2nd Lord Seton. This former house appears to have been built on an L plan, with staircase in the re-entering angle. It was burnt by the English.

The present building, which is described in the *Inventory of Ancient Monuments* for the County as "the choicest example of Renaissance architecture in the County," was, except for later additions, built in 1620 by George, 8th Lord Seton and 3rd Earl of Winton, whose initials, together with those of his wife, Anne Hay, are carved on the stone mantelpiece in the drawing-room. Though this Lord Seton is said to have built the house "from the foundation," he seems to have incorporated part of the older house, as is testified by the vaulted basement storey, with evidence of a huge, almost Gothic, fireplace in the kitchen. Lord Seton's architect appears to have been William Wallace, who later was architect of George Heriot's Hospital in Edinburgh.

The beautiful plaster ceilings in the rooms of the two principal floors seem to have been executed by a body of plasterers—possibly under Italian direction—who used the same moulds in the ceilings of many other houses in the East of Scotland, notably Pinkie House, Moray House, Edinburgh, Balcaskie, Fifo, Slaines Castle, and Auchter House in the County of Angus. There is a record of a bill to one "Quhyte of Tranent for plaster work at Winton House," which suggests that local craftsmen were employed under direction of a skilled master. The ceiling in King Charles's room was decorated in honour of Charles I, who stayed with Lord Seton on his way to be crowned at Scone Palace in 1633. After 1715, George, 5th Earl of Winton,

then proprietor, was attainted for having taken part in the Jacobite rising of that date, and his property forfeited. Winton House was sold to a speculating company, called the York Building Company. As the tenants of the forfeited estates failed to pay their rents to the usurping Company, preferring in many cases to send them to the banished owner, the York Building Company became bankrupt and Winton House was purchased by the neighbouring laird, Col. Hamilton of Pencaitland, the remains of whose house can be seen in the grounds of Winton. From Col. Hamilton it eventually passed, on the death of his niece, Lady Ruthven, in 1885, to the late Miss Nisbet Hamilton (Mrs Hamilton Ogilvy) of Biel.

Col. Hamilton added considerably to the house, thereby destroying much of the architectural charms; but, as his additions, which were finished in 1805, were kept low, the upper portion of the old house, on which most of the decorative detail was lavished, together with the ornated, carved, and twisted chimneys, is still kept in view.

Full descriptions of the building will be found in the *Inventory of Ancient Monuments* for the County and in Macgibbon & Ross' *Castellated and Domestic Architecture of Scotland*. Reference should also be made to *Sketches of East Lothian* by David Croal.

PENKAET CASTLE.

Visited 26th September 1925.

Leader:—Professor IAN B. STOUGHTON
HOLBOURN.

The members were received by Professor Holbourn who since he acquired the property in 1922 has devoted a good deal of time to the study of the castle and has done much to elucidate its history. He explained that, although less loosely used than in France, the English term castle has no definite connotation, but is generally applied to any baronial residence.

Penkaet is a small barony, and the baronial court-room and the joughs and the "doocot" that mark a barony still exist.

The property was formerly known as Woodhead (or in old Keltic Penkaet) and it had borne that name for about 200 years, though the phrase "alias Southwood" often occurs in the title deeds. When John Lauder of Newington, Merchant, Edinburgh, acquired the property in 1681 the lands were erected into the barony of Fountainhall, and when his son, Sir John Lauder, was elevated to the Bench in 1689 he took the title of Lord Fountainhall from the property.

Professor Holbourn explained that while most authorities assigned the building to the 17th century he was of opinion that there was a house there about 1490, which is now the lower part of the North Eastern mass. It was sold to Adam de Crichton in 1506. The portion containing the front door and the inserted 18th century stair was probably built by him or his successors. In 1554 it passed into the hands of Alexander Cockburn, who died in the house in 1579. He or his immediate successor probably built the rest of the S.W. mass, now known as the tower, which is built against the two aforementioned portions with straight joints and without bonding. The next enlargement was the portion to the east of the original mass, approximately toward the close of the 16th century.

The castle passed in 1636 from the Cockburns to the Pringles, who may conceivably have built the above, but who certainly built the East Wing containing the Court Room. As the S.E. corner of this shows an old built-up arch and a built-up flue to the south of it, there was probably an older building on this part of the site which was incorporated. The date of this wing is certain—1638. It occurs on the face of the gablet of the S.W. dormer and below the corbel on the S.E. Initials of the Pringles also occur on the gablet and on the N.E. skew-putt.

The late Jacobean gateway in the southern continuation of this wall may be dated toward the close of the 17th century about the time (1681) that the

property passed to the Lauder family. Prof. Holbourn maintained that this implied a terrace and decided to build one. In digging for the foundations the old foundations were discovered coinciding within six inches at the E. end with the new line. As he purposely set back the W. end, a few stones of the old foundations can be seen rising as an island in the lily-pond below the Terrace. The other " island " marks the position of the steps from the old entrance way between the " doocot " and the later cart-house.

The early eighteenth century saw the introduction of the Memel pine panelling to replace the tapestry of which continuous tradition speaks, although the window recesses seem to have been panelled before and show fragments of older work.

The great buttressed enclosing wall was built about the end of the 18th century, possibly by Sir Thomas Dick Lauder.

In the nineteenth century the estate broke up and the buildings declined. The family went to the Grange in Edinburgh and since the Disruption the castle has been occupied by the first Free Church Minister, Mr Robertson, and his family after him. During that period the building became almost a ruin, particularly the upper floor; and the court-room entirely so.

In 1922 Prof. Holbourn bought the place and restored the roof and upper floors, particularly the small tower room with its oak panelling. During the restoration two pieces of the traditional tapestry were discovered behind the plaster of a ruinous wall, which may be respectively dated 1590 and 1630. A small window was discovered in the S. wall of the upper E. room and in the large W. room was discovered the stone arch which had been built up and which is perhaps the most effective feature of the interior. In 1929 Prof. Holbourn restored the lost dormers of the court-room for which the evidence was certain, and with some hesitation inserted stone arches on the inside, for which there was no evidence.

LONGCROFT FORT.

Visited 29th June 1929. *Leader*:—Rev. WILLIAM McCÓNACHIE, D.D.

On this occasion the excursion to the Lammermuirs led us beyond the borders of the county into Berwickshire, and the party met at Cleek-im-in School, about three-quarters of a mile south of Carfrae Mill Inn on the Greenlaw Road. They then proceeded up a beautiful and typical Lammermuir valley to the farm of Longcroft.

Among the most interesting of the Lauderdale system of forts is that one on the hill behind this farm. Within its ramparts are six large enclosures with traces besides of hut circles. A problem in connection with many of these forts is the water supply, so scanty often where it exists at all as to show that the forts were intended to be used as refuges in times of danger and against sudden attacks rather than permanently occupied unless by a guard. At Longcroft, however, there was a well between two of the ramparts.

The forts were constructed by the Otadini or Otalini, early Celtic tribes who inhabited the eastern Borders from pre-Christian down to early Christian days. Those who made them showed great skill in the positions they chose and in the way they strengthened them with high embankments of earth and stone. Palisading was used besides to add to their security, and the entrances were closed by heavy wooden gates with guard-houses near them. Other ingenious contrivances increased the difficulties of the attack. In common with the other tribes of Britain, the Otadini had the reputation of being brave and valorous opponents. Nor were they rude barbarians, as was long supposed. They had a knowledge of agriculture, and used the quern to grind the grain reaped from their little fields. The art of weaving was understood among them, as the whorls found about their settlements show. Brooches and pins with other articles of personal adornment, many of them beautifully enamelled, testify to their artistic skill.

As the natural gateway of Scotland, Lauderdale was strongly defended

by a large number of hill forts. They occupied the heights on both sides of the valley of the Leader, often in twos evidently for mutual support, and almost as often one on either side of a glen. In almost every case they are placed where they could signal a warning or call for help to each other. This was done by means of fire or smoke. In the fifth and sixth centuries the country from the Firth of Forth southward along the east coast came under the power of the Angles. These invaders captured in time all the forts and strongholds of the native tribes both in East Lothian and Berwickshire. Oxton (Uchtred's town), Addinston (Aldin's town), Lyleston (Liulf's town), probably represented townships and grants of land made by Angle kings to warriors for their valour, just as such grants were given centuries later by the Normans. The forts were followed by Angle townships, which passed in turn into crofting communities, and through them during the seventeenth century into the modern farms near them. Many farms still commemorate in their names their connection with the old fort.

On descending the hill the party received the hospitality of Mr W. B. Dickinson, the well-known tenant of Longcroft, who, at the same time, showed his fine collection of flint arrows, celts, querns, and other interesting remains found in the neighbourhood. Subsequently the party climbed a hill on the farm of Addinston and there inspected another fort which is noteworthy for the high defences.

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FIFTH ANNUAL REPORT

OF THE

East Lothian Antiquarian and Field Naturalists' Society.

The Council beg to submit their fifth annual report. The membership of the Society numbers 312, there being 18 life members, 2 honorary life members, and 292 ordinary members. 247 ordinary members have paid their subscriptions for last season (1928), leaving 45 ordinary members' subscriptions unpaid.

Shortly after the Annual Meeting in May 1928, Part III of the first volume of the Society's "Transactions" was issued to the members. The principal contents consisted of "Notes on the East Lothian Fauna," by Mr H. Mortimer Batten, Pencaitland; "The Monastery of North Berwick," by Mr D. B. Swan, North Berwick; "East Lothian Sanctuary Associations," by Mr Hugh Hannah, Edinburgh; and "Suggestions for Research." Within the past few days Part IV of the first volume of the "Transactions" has been published, containing, as its chief features, "The Gray Library," by Mr W. Forbes Gray; "The Birds of the Bass Rock," by Mr H. Mortimer Batten; and Historical Notes on fifteen places visited by the Society.

The foundation has now been laid for a sphere of the Society's work which will prove of inestimable value, and the Council feel sure that the members appreciate highly the kindness of the authors, and also of the Editorial Board (Rev. Marshall B. Lang, Mr J. H. Jamieson, and Mr William Angus).

A programme of five Excursions was prepared for 1928, viz.:—May 12—Goblin Ha' and Bothan's Church; Leader, Mr John Russell, F.S.A.Scot.

June 9—St Abbs Head; Leader, Mr H. Mortimer Batten. June 30—Priestlaw; Leader, Rev. Marshall B. Lang, B.D., T.D. July 21—Hailes Castle; Leader, Mr James S. Richardson, F.S.A.Scot. September 22—Tantallon Castle; Leader, Mr James S. Richardson, F.S.A.Scot. Unfortunately, owing to very inclement weather, the excursion to St Abbs Head had to be abandoned, but members will be pleased to note that it is included in the programme for 1929. Delightful weather favoured the other excursions, all of which were largely attended and much enjoyed. It is intended to include in subsequent "Transactions," as in Part IV, Vol. I, summaries of the various excursions. To the gentlemen who acted as leaders the Society is greatly indebted.

The Council, as authorised, arranged three Winter lectures, viz.:—On 18th December 1928, Mr H. Mortimer Batten lectured at North Berwick on "The Lure of the Wild;" on 18th January 1929, Mr Escott North lectured at Haddington, his subject being "On the Trail of the Cowboy;" and on 15th March 1929, Mr J. H. Jamieson gave a lecture at Haddington on "The Incorporation of Hammermen of Haddington." All the lectures proved highly interesting, but the Council regret that the first and second lectures did not receive the measure of support that was anticipated from either the members of the Society or from the general public, and that a considerable loss was incurred. The Council recommend that such lectures be dropped in the meantime. It may be possible to arrange for lectures on less ambitious lines by non-professional lecturers and without the expense of elaborate apparatus. Mr Jamieson's valuable researches into the history of the Incorporation of Hammermen of Haddington it is hoped to publish in the *Transactions*.

The Council have had under consideration the question of placing a limit on membership of the Society, it having been represented that, with the large numbers attending the excursions, difficulty was being experienced in hearing the leaders. It was decided to recommend that the membership of the Society be limited to 350, and that members be requested to take not more than one friend to the Excursions.

INDEX.*

- Abbey Farm, North Berwick, 63.
 Aberlady, barony of, 141; parish church of, visit to, 140, 141.
 Aceard, 6
 Ada, Countess of Northumberland & Huntingdon, charters by, 7, 10, 11, 186; founds Haddington Monastery, 204.
 Addinston Fort, visit to, 227.
 Aelfric, 6.
 Ainslie, J., clerk of the Baxters of Haddington, 21.
 Aithernie, Fife, 55.
 Alexander II, born at Haddington, 72.
 ———— III, at Yester, 193, 194.
 Alice, sub-prioress of North Berwick, 61.
 Allan, George, miller, Haddington, 28.
 Angus, Earl (6th) of, 213.
 ———, George, Earl of, 213.
 ———, William, Two Early East Lothian Charters, 5-11.
 Annandale, John, Earl of, 202.
 Archæology, suggestions for research in, 93.
 Archer, John, bailie of Haddington, 15.
 Ardros, 56.
 Arnot of Cockburnspath, William, 150.
 Arnotts of Fast Castle, 158.
 Athelstane, King, at Dunbar, 73.
 Athelstaneford (Elstanesford), 7, 10.
 Auldhame, lands of, 8, 9; church of, 199; parish of, 201.
 Ayton, John, in Haddington, 16.
 Badgers, 50, 51.
 Baillol, Hugh de, 7, 8, 11.
 Baird, Major W. A., 134.
 ———, Lady Hersey, 134.
 Bairs of Newbyth, 201.
 Balfour, Earl of, 132, 220.
 ———, Miss Alice, 132, 133; Butterflies and Moths in East Lothian, 169-184.
 Ballencrieff, hospital at, 140.
 Banglaw, 7, 10.
 Baptismal Fonts, 139, 143, 144, 203.
 Barns, Alexander, in Haddington, 16.
 Baro, lands of, 7, 10, 195; church of, 83.
 Barrie, Thomas and William, messengers, 86.
 Bass, Laird of. See Lauder.
 ——— Rock, 58, 60; birds of, 49, 125-130; visits to, 155, 156; parish church of, 158.
 Batten, H. Mortimer, 155, 156; Notes on the East Lothian Fauna, 49-54; The Birds of the Bass Rock, 125-130.
 Bawgone, Mains of, 58.
 Baxters, Incorporation of. See Haddington.
 Beatrice, prioress of North Berwick, 60.
 Beck, Anthony, bishop of Durham, besieges Dirleton Castle, 215.
 Begbie, David, merchant, Haddington, 32, 33.
 Bell Cairns, 151.
 Bells, Church, 134, 139, 150.
 Berwickshire, hill forts of, 152.
 Bible, old, 202.
 Bickerton (Bekirtoune) of Luffness, William de, 218.
 ———, John, baxter in Haddington, 23.
 Binning, George, Lord, 203.
 ——— Woods, visit to, 221.
 Birds of Bass Rock, 125-130.
 Bisset, Walter and William, 79, 80.
 Black Dyke, 152.
 Blackgame, 50.
 Blahan, priest of Litun, 142.
 Blaikie, W. B., LL.D., 207.
 Blair, Hugh, minister of Rutherglen, 110.
 Bothans, village of, 137, 186, 190, 198.
 ———, Collegiate Church of, 190, 198; visit to, 137.
 Bothwell, James, 4th Earl of, 220.

* For alphabetical List of Members of Incorporation of Baxters, Haddington, see pp. 37-40.

Bower, Walter, abbot of Inchcolm, a native of Haddington, 81, 193.
 Bread, assize of, 15, 29.
 Broun of Coalstoun, Charles, 30-32.
 ———, George, 194.
 Broxmouth (Broccesmuthe), 6, 9.
 Buchan-Hepburn of Smeaton, Lady, 143.
 Burght, Stene, in Haddington, 16.
 Burnet (Burnett), Alexander, 209.
 ———, Gilbert, minister of Saltoun, 105, 106, 108, 121, 122.
 Burns, Robert, visits Dunglass, 147.
 "Burnt Candlemas," the, 200.
 Butterflies found in East Lothian, 169-171; list of, 172.
 Buzzards, 49.
 Cairns, George, officer of the Haddington Baxters, 32.
 ———, Principal John, 148.
 Cairns, Bronze Age, 152; Bell, 151.
 Caldwell, Rev. Thomas, B.D., Ph.D., 140.
 Campstoun, 58.
 Carel, toft in, 7, 8, 10.
 Carelsira, 7, 10.
 Carkettle, burgess of Edinburgh, 146.
 Carric, Elena de, prioress of North Berwick, 61.
 Castle, the origin of, 186, 187, 219.
 Catrail, the, 152.
 Chalmer, Andre, 88.
 Charles I, visits Winton House, 222.
 ———, Prince, 208.
 Church: legacy for distressed Episcopal clergy, 110.
 Churchyard Watch-house, 145.
 Cloickisholm Mylne, 86.
 Cnolle. See Knowes.
 Coalstoun Pear, the, 194.
 Cochran, "Wull," baker, Haddington, 34.
 Cockburn of Clerkington, Sir John, 87.
 ———, Richard, 87, 88.
 ——— of Woodhead, Alexander, 224.
 ———, Robert, miller, Haddington, 27.
 Cockburnspath, parish church of, visit to, 148-150.

Communion Tokens, 145.
 ——— Vessels, 134, 141-145, 150.
 Cope, Sir John, 208, 209.
 Cormorants, 125.
 Corrie, Rev. R. Clayton, B.D., 141.
 Cospatric, 10.
 Covenanters, pamphlets on, in Gray Library, 119, 120.
 Cowan, James, chaplain, 58.
 Craig, the, 58. And see Bass Rock.
 Craw, James Hewat, 151, 157.
 ———, Peter, clerk of the Baxters of Haddington, 21.
 Crawford, Margaret, nun, 64.
 Credence, recess, 217.
 Cressit, 218.
 Crichton of [Ruthven], Adam, 224.
 Cross-Chain Hill, 77.
 Crumbestrother, 10.
 Dalgetty in Prestonpans, 92.
 Dalrymple of Hailes, Sir David, 220.
 ——— of North Berwick, Sir Hew, Lord President of the Court of Session, 69, 205, 213.
 ———, Sir Hew Hamilton, 64, 155, 156, 213.
 ———, Sir Walter Hamilton, 215.
 Dalrymples of Nunraw, 205.
 Darling, Elen, nun, 64.
 ———, Mrs. Priestlaw, 151.
 Darnley, Henry, Lord, his murder plotted at Whittingehame, 132.
 David I, references to charters by, 7, 10, 55, 56, 72, 74, 76, 199.
 Defoe, Daniel, 92; visits Yester, 91, 185.
 D'esse, General, 61.
 De Quincey, Thomas, 91, 92.
 De Quinceys of Tranent, 91.
 De Thermes, 218.
 De Vaux of Dirleton, 190.
 ———, William, 215.
 Dice, Mr. doctor of the Grammar School, Haddington, 110.
 Dick of Braid, Sir William, 69.
 Dickinson, W. B., 227.
 Dirleton, John, Earl of, 216.
 ——— Castle, 188, 190, 197, 219; visit to, 215-217.
 Donaldson, Margaret, nun, 64, 67.
 Doon Hill, 146.

Douglas, Earl of, 80, 213.
 —, William, 1st Earl of, 213.
 — of Kilspindie, Patrick, 140, 141.
 —, Gavin, parson of Linton, 142.
 —, John, mason, burgess of Haddington, 135.
 Dovecots, 214, 217, 224, 225.
 Drem, 10.
 Dunbar, Earl of, 158.
 —, —, Gospatric, 9.
 —, —, Patrick, 194.
 —, Black Agnes of, 200.
 —, 9, 29, 80, 73, 194; battle of, 146; castle of, 190, 197; Collegiate Church of, 133, 144, 151.
 Duncan II, charter by, 5, 6, 8, 75.
 Duncanlaw, 7, 10, 195.
 Dundas of Arniston, Robert, Lord Advocate, 31.
 Dunfermline, Earl of, 196.
 Dunglass, visit to, 146-148.
 Dunlop, W. B., 137.
 Durhame of Kinnell, James, 69.
 Earlsferry, hospital at, 55, 57.
 Earnulf, 6.
 East Linton, over-mill of, 63.
 — Lothian, early charters relating to, 6-11; fauna of, 49-54; sanctuary associations of, 71-92; mediæval castles in, 152; butterflies and moths found in, 169-184.
 Edgar, King of Scots, 6, 9.
 Edinburgh, Trinity College and hospital of, 77, 155.
 Edolf, son of Ginel, 186, 191.
 Edward VII, visits the Bass, 156.
 Eider Ducks, 157.
 Elibank, Lord, 110.
 Erskine, David, W.S., 59.
 —, Sir Thomas, Earl of Kelly, 216.
 Ethelreda, wife of Duncan II, 9.
 Fairknowe, chapel at, 200.
 Fairs, 210.
 Fast Castle, 49; visit to, 157, 158.
 Fife, Earl of, 213.
 —, — (4th), Duncan, 55, 57.
 —, — (5th), Duncan, 55-57.
 —, — (6th), Malcolm, 56-58.
 Fletcher of Saltoun, Sir Andrew, 122.
 —, —, Henry, 110; his son Andrew, 110.

Fletcher of Saltoun, Sir Robert, 121, 122.
 Fletchers of Aberlady, 141.
 Flowers, Wild, 157.
 Fodan, bishop of Alban (c.955), 9.
 — (1059-93), 6, 9.
 Folklore, Suggestions for research in, 95.
 Fonts. See Baptismal Fonts.
 Ford, lands of, 199.
 Forman, Elizabeth, prioress of North Berwick, 62.
 Forrest, John, minister of Prestonkirk, 143.
 Forrester, Gelis, wife of Bernard Thomson, 16.
 Fortona, 10.
 Fountainhall, barony of, 224.
 Fowler, Sir William, chaplain, 63.
 Fraser, Sir Simon, 196; his daughter Mary, 196.
 —, Mrs, 210.
 Friars' Nose Fort, 150.
 Friarsward (Luffness), Carmelite Chapel at, 140.
 Fulmar petrels, 49, 129, 157.
 Galbraith, Robert, parson of Spot, 146.
 Galfrid, 10.
 Galloway, Patrick of, murdered at Haddington, 79.
 Gamel, 186, 191.
 Gamelshiels, Tower of, 186.
 Gamelston, 186, 190.
 — Burn, 186.
 Gannets, 49, 125-129, 155, 156.
 Gardiner, Colonel, 209.
 Garmeltun, 10.
 Garvald, 10; parish church of, 204; ancient graves at, 206; Sir Walter Scott visits, 207.
 Gateway, Jacobean, 224.
 Geometrae of East Lothian, 178-178.
 Gibson, William, provost of Haddington, 14, 15.
 Gifford, Sir Hugh (1st), 7, 8, 11, 185-187.
 —, — ("the Wizard"), 136, 187, 189-195, 198.
 —, — (the last), 196; his daughter Johanna, 196.

Gifford, Sir John, 195, 196.
 —, Walter, 7, 8, 11.
 —, Walter, 190; his son Walter, Chancellor of England, 190.
 —, William, (12th cent.), 7, 8, 11.
 —, William, (13th cent.), 194, 195.
 Gifford, 50, 52, 137; Sir Walter Scott visits, 207.
 —, Water, 135.
 Giffordgate, lands of, 186.
 Gilis, 7.
 Gillicamestone, 55-57.
 Ginel, 186.
 Girthgate, the, 154.
 Gledstane, Agnes, nun, 64.
 Glenkinchie, 52.
 Goblin Ha', visit to, 136; article on, 185-198; visited by Sir Walter Scott, 207.
 Goldfinch, the, 50.
 Gordon, Seton, 155, 156.
 Gourlay of Hailes, Hugh, 220.
 Gowrie, Ruthvens, Earls of, 215.
 Grange, Fife, 64.
 Grant of Archerfield and Biel, Lt.-Col. J. P. N. H., 216.
 Gray of Nunraw, Lieut.-Col. W. Wingate, and Mrs Gray, 204.
 —, Andrew, merchant, Haddington, 106.
 —, John, clerk of the Baxters of Haddington, 21.
 —, Mr John, minister of Tulliallan, Glasgow and Aberlady, his life, 105-108; the founding of the Gray Library, 108-111; description of its contents, 111-123.
 —, Rev. Lothian, M.A., 144.
 —, Walter, minister of Garvald, 108; Walter, his son, 108.
 —, W. Forbes, The Gray Library, Haddington, 105-123.
 —, Library, Haddington, 105-123; incunabula in, 114.
 Great Spotted Woodpecker, the, 49, 50.
 Green Woodpecker, the, 50.
 Grenton, 6.
 Guillemots, 49, 125, 156, 157.
 Gullane, church of, 83.
 —, Quarry, 216.
 Gulls, 49, 156, 157.

Haddington, Earl of, 201-203.
 —, Thomas, 6th Earl of, 221.
 —, Thomas, 7th Earl of, 221.
 —, 7, 8, 10, 18, 52, 72, 80, 81, 203, 218; burgh seal, 18, 19; town mills, 25-29; corn market, 30; regiments in, during Napoleonic Wars, and their supply of bread, 34, 35; siege of (1548), 34, 61; royal palace in, 78, 79, 83; Episcopal meeting-house in, 107.
 —, Incorporation of Baxters of, 13-40; their altar, 13, 14; assize of bread, 15, 29; competition of unfreemen, 16, 17; apprentices, 17, 22-24; clerks of, 21; their seat in the church, 22; "essays," 23, 24; "nick-sticks," 25; memorials of, in churchyard, 37; list of members, 37-40.
 —, Church Street, 110.
 —, Cistercian Nunnery at, 134, 204.
 —, Gimmers Mills, 29.
 —, Gray Library in, life of the donor, 105-108; foundation of, 108-111; description of its contents, 111-123.
 —, Hardgate, 34.
 —, Nungate, 33, 34, 186.
 —, Bridge, 20.
 —, Poldrate, 25.
 —, Presbytery of, 106, 109.
 —, Provost and Magistrates of, 30, 109, 110.
 —, Church of St. Martin's in, 79, 199.
 —, Church of St. Mary in, 79, 108, 199.
 —, Tolbooth of, 22.
 —, Incorporated Trades of, 13, 14.
 Hailes Castle, 190; visit to, 218-220.
 Hall of Dunglass, Sir James, 147, 157; his son Captain Basil, 147.
 —, Sir John, 147.
 Halyburton of Dirleton, John, 215.
 —, James, W.S., bailie of Holyrood, 88.
 —, Patrick, 89, 90.
 Hamer, church and lands of, 199.

Hamilton of Pencaitland, Colonel, 223.
 — of Preston, Sir John, 210.
 —, Sir Thomas, 210.
 —, Sir William, 1st baronet, 210.
 — of Redhouse, George, 87-89.
 —, James, W.S., 87.
 —, John, rector of Spott, 146.
 — House, visit to, 211.
 Hamilton-Dalrymple. See Dalrymple.
 Hamilton Ogilvy of Biel, Mrs, 223.
 Hannah, Hugh, 146; East Lothian Sanctuary Associations, 71-92.
 Harelaw Fort, 153.
 Hares, 52.
 Harlaw, Thomas, reader of Cockburnspath, 148.
 Haugh, church of, 141.
 Hay of Locherwort, Sir Gilbert, 196.
 —, Sir John, 196.
 —, Sir Thomas, 196.
 — of Nunraw, Robert, 205.
 —, Anne, wife of George, 3rd Earl of Winton, 222.
 —, Marion, 194.
 —, Mr Richard, schoolmaster, Haddington, 32.
 Hays of Errol, arms of, 150.
 Hedderwick, 6, 9.
 Hemming, 6.
 Hepburn of Luffness, Patrick, 218.
 — of Waughtoun, Kentigern, 218.
 —, Sir Patrick, 68;
 — Elizabeth, his daughter, 68.
 —, Patrick, 218.
 —, Archibald, Whittingehame Mains, 170.
 —, Dame Elizabeth, prioress of Haddington, 204, 205.
 —, Lady Janet, 139.
 —, Robert, yr., in Over Hailes, 218.
 Hepburns of Beanston, 205.
 — of Hailes, 205, 219.
 Heriot, Agnes, of Trabroun, 84.
 Hermer, 6.
 Heterocera, list of, in East Lothian, 172-174.
 Heugh, lands of, 63.
 Hill Forts, visits to, 151-153, 226, 227.
 Hogg, Andrew, miller, Edinburgh, 27.
 —, Margaret, wife of John Wilson, 16.

Holbourn, Professor Ian B. Stoughton, 223-225.
 Holyrood, abbey of, 10, 86, 199; bailie of, 87-89, 92; sanctuary of, 71, 75, 80, 81, 85-92.
 Home (Hume), George, 4th Lord, 158.
 — of Dunglass, Sir Alexander, 147.
 — of Fast Castle, Elizabeth, 158.
 —, Sir Patrick, 158.
 — of North Berwick, Alexander, 63, 64.
 —, Sir Alexander, 61, 64-69; bailie of the monastery of North Berwick, 65.
 —, Sir John, 69.
 — of Polwarth, Alexander, 62.
 —, Sir Patrick, 62, 66, 68.
 —, Patrick, 69.
 —, Alison, prioress of North Berwick, 62.
 —, Isobel, prioress of North Berwick, 62.
 —, Margaret, prioress of North Berwick (1544-62), 62-64, 66.
 —, 61, 62, 65.
 —, 66, 68.
 Hopes, 151; "black dyke" at, 152.
 — Burn, 136, 137, 152, 187, 188.
 Hopetoun, Earl (1st) of, 221.
 Horsecruick, John of, 63.
 Hour-Glass, 144.
 Humble Wood, 50.
 Hunter, Thomas, 86.
 Huntingdon, David, Earl of, 7, 8, 11.
 —, Henry, Earl of, (Prince Henry), 10, 72, 204.
 Hutton, James, Geologist, 157.
 Ingibjorg, wife of Malcolm III, 8.
 Innerwick, battle at, 194; church of, 83.
 James I, visits the Bass, 156; builds pilgrim houses at Whitekirk, 200.
 — IV, visits the Bass, 156; and Whitekirk Church, 200.
 — V, dismantles pilgrim houses at Whitekirk, 200; besieges Tantallon Castle, 213, 214.

- James VI, incident at Seton House, 138; visits the Bass, 156.
 —, Dr Wallace, 10.
 —, prior of North Berwick, 58.
 Jamieson, James H., The Incorporation of Baxters of Haddington, 13-40.
 Jeffrey, Francis, Advocate, 36, 90.
 —, George, bailie of Holyrood, 90.
 Jhonsone, Robert, 65.
 Jouns, the, 145, 221, 224.
 Kello, Mr John, minister of Spott, 146.
 Kelly, Thomas, Earl of, 216.
 Kestrels, 49.
 Kilbrachmont, church of, 59.
 Kilbride, West, church of, 58, 59.
 Kilconceath, Adam and Duncan de, 56.
 Kilconquhar, church of, 57, 59, 67, 68; vicar of, 62.
 Kilspindie Castle, 140.
 Kirk, Mr James, schoolmaster, Haddington, 30.
 Kipdof, 10.
 Kingston, Viscount (1st) of, 220.
 —, Archibald, Master of, 87.
 Kinkeith, mills of, 63.
 Kirkamstoun, 55.
 Kirklands (Luggate), church at, 133, 134.
 Kittiwakes, 49, 125, 126, 156, 157.
 Knowes (Cnolle), 6, 9.
 Knox, John, 112; his birth-place, 115.
 Laidlay, Mrs, 203.
 Lammerlaw, 53, 152.
 Lammermoors, birds of, 49, 50; visits to Hill Forts of, 151-153, 226; Moths found on, 173, 177, 180.
 Lamp, stone, 218.
 Lang, Rev. Marshall, B.D., 133, 150.
 Langelaw, 10.
 Largo, church of, 57, 59, 62, 67, 68.
 Launder of Bass, Sir Robert, 62; Margaret, his daughter, 62.
 —, Robert, 57, 58, 156.
 — of Fountainhall, Sir John, 224.
 —, Sir Thomas Dick, 225.
 — of Newington and Fountainhall, John, 224.
 —, John, minister of Cockburnspath, 148.
 —, Sir Robert, notary, 58, 64.
 Lauderdale, John, Duke of, 135.
 Law of Elvingston, William, 30.
 Lennoxlove (Lethington), 51, 186; visit to, 134, 135.
 Lepers squint (Spott), 144.
 Lepidoptera of East Lothian, 169-171; list of, 172-184.
 Lesser Black-back, 49.
 Levynton, Katrine, nun, 64.
 Leys, John de, 198.
 —, Matilda de, prioress of North Berwick, 61.
 Linton, 29; church of, 83, 141, 142.
 Logan of Restalrig, Robert, 158.
 Logy Aithry, church of, 57, 59, 62, 67.
 Longcroft Fort, visit to, 226, 227.
 Longyester, 153, 186, 198.
 Lorimer, Sir Robert, K.B.E., 201, 202.
 Lothians, chapmen of, 210.
 Loupin-on-stane, 141.
 Louis of Merchiston, John, Yr., 110.
 Luffness, Carmelite Convent of, 140; visit to, 217, 218.
 — House, 140, 217, 218.
 Luggate, church at, 133, 134.
 Lumsdens of Lumsden, 158.
 Lyell, Sir George, curate of North Berwick, 58.
 Lyleston, 227.
 Lyon, Mathew, clockmaker, Haddington, 133.
 McConachie, Rev. W., D.D., 153, 226.
 Mackenzie of Portmore, 141.
 McNeill of Northfield, Miss, 211.
 Mains, lands of, 63.
 Maitland of Lethington, Sir Richard, 10, 87, 135; his daughter Helen, 87.
 —, Alexander, Factor, 135.
 Major, John, 117.
 Malcolm III, 6, 8, 9, 75.
 — IV, references to charters by, 11, 75, 76, 154, 185.
 —, brother of Duncan II, 6, 9.
 Malt, cultures on, 27.
 Manuell, John, minister of Whittingehame, 134.
 Margaret Tudor, Princess, at Fast Castle, 158.
 Marjoribanks of Northfield, 211.
 —, Rev. George, minister of Stenton, 211.
 —, Rev. Thomas, minister of (1) Garvald and (2) Prestonkirk, 170, 211.

"Marmion," references in, to the Goblin Ha', 189, 193.
 Mary, Queen of Scots, at North Berwick monastery, 60; her association with Hailes, 220.
 — of Gueldres, widow of James II, 77, 154.
 Matheryne, Fife, 55.
 Maxwell of Innerwick, Sir John, 216.
 Maybole, church of, 58, 59, 61, 67, 68.
 Mayne, John, baxter, Haddington, 14, 18.
 Meadowmill, 208, 209.
 Meikle, Andrew, civil engineer, Houston Mill, 142.
 Miller, James, printer, 105, 113.
 Millknowe, 186.
 Mills, 10, 25, 26-29.
 Monk, General, dismantles Tantallon, 213; and Dirleton Castle, 216.
 Montfort, John de, 10.
 Moreville, Malcolm and Richard de, 10.
 Morham, Adam de, 187, 192, 195.
 —, Sir Thomas de, 194, 195; his daughter Eufamie, 195.
 —, lands of, 195.
 Moths found in East Lothian, 169-171; list of 172-184.
 Muat, Robert, in Haddington, 23.
 —, Thomas, apprentice baxter, Haddington, 22.
 Multures, 26, 27, 31.
 Natural History, Suggestions for research in, 95, 96.
 Neidpath Castle, 198.
 Nelson, Dr, Pitcox, 170.
 Newland Burn, 187, 188.
 — Hill, 152.
 Nisbet of Dirleton, Sir John, 216.
 —, William, at the Lint Mill near East Linton, 170.
 Noctuae of East Lothian, 174-176.
 North Berwick, almshouses in, 58; hospital at, 55-57; hospital of Laird of Bass in, 57; bailies of, 65.
 —, barony of, 57, 66, 69.
 —, Church of, 56, 59, 66, 67.
 —, Law, "bail" on, 68.
 —, monastery of, 55-69, 83; prior of, 58; prioresses and

nuns of, 60-62, 64; seal of, 55, 64.
 —, Newark in, 61.
 —, Nungate of, 65.
 —, Quality Street in, 57.
 —, Westgate of, 65.
 Northfield House, visit to, 207, 211, 212.
 Northumberland, Henry, Earl of, 10, 72, 204.
 Nungate, 33, 34, 186 (Haddington); 65 (North Berwick).
 —, Bridge, 20.
 Nunraw, visit to, 204-207; painted ceiling at, 206.
 Ogilvy of Winton, Gilbert F. M., 222.
 Oldhamstocks, church of, 83, 148, 149.
 Oliphant of Muirhouse, Sir William, 194, 195.
 Ormiston, yew tree at, 132.
 Oswald of Preston, James, 210.
 Otadini (Otalini), 226.
 Otters, 51.
 Oven, mediæval, 219.
 Owls, 53, 54.
 Oxton, 227.
 Papadie of Dunglass, Stephen, 147; Helen, his relict, 147.
 —, Nicola, 147.
 Papple (Popill), convent near, 134.
 Paralides of East Lothian, 178, 179.
 Paterson, Helen, wife of Stene Burght, 16.
 Pathhead, 52.
 Paul, Sir James Balfour, C.V.O., 203.
 Pencaitland, church of, 83.
 Penkaet Castle, visit to, 223-225.
 Penny wedding, 24, 25.
 Penshiel, chapel at, 133, 151; grange-farm at, 151.
 Penston, 33.
 Peregrine Falcons, 49, 50, 129, 157.
 Pettowie (Petollin), 7, 10.
 Piccolomini, Aeneas Sylvius (Pius II), visits Whitekirk, 200.
 Pigeons, 130.
 Piscinas, 137, 139, 188, 217.
 Poor, kirk door collections for, 143.
 Prendergast, —, 81.
 Preston, visits to, 207-212; thorn tree at, 207, 209; battle of, 207-210.
 — Cross, visit to, 210, 211.
 — Tower, 208; visit to, 209, 210.

- Prestonkirk (Preston, Prestonhaugh), parish church of, visit to, 141-143.
- Prestonpans, 92, 211.
- Priestlaw, visit to, 150, 151.
Hill, 150.
- Pringle of [Templehalls], 224.
- Puffins, 49, 130, 156.
- Pulpits (Jacobean), 137, 144.
- Puntoun, Alison, nun, 64.
- , Thomas, bailie of Haddington, 14, 15.
- Quhyte, plasterer, Tranent, 222.
- Radepo, 10.
- Ramsay, Agnes, nun, 64.
- , Mariot, prioress of North Berwick, 62.
- Rankin, Rev. Edward B., minister of Whitekirk, 203.
- , Rev. W. E. K., B.D., 148.
- Rats, 53.
- Ravens, 49.
- Ravenswood Castle, suggested sites of, 147, 207.
- Razorbills, 156, 157.
- Records, suggestions for research in, 93-95.
- Redhouse, mansion-house of, 140.
- Reid, Thomas, messenger, 87.
- Rennie, George, in Phantassie, 142;
John, his son, 142.
- Renton, Isobell, nun, 64.
- Research, suggestions for, 93-96.
- Rhodes, Andrew of, 63.
- Rhopalcorea of East Lothian, 172.
- Richardson, James S., 18n, 199, 207, 209, 212, 215, 217, 219, 220.
- Riggonhead, 208.
- Robedd'ne, 10.
- Robert I, reference to charter by, 195.
- , chaplain of the chapel of Cockburnspath, 148.
- , son of Galfrid, 10.
- Robertson, Mr. Free Church Minister at Pencaitland, 225.
- Roe-Deer, 51.
- Ross, Thomas, LL.D., 201.
- Russell, John, 136, 220; Yester and its "Goblin Ha", 185-198.
- Ruthven, Lady, 223.
- of Dunglass, Sir John, 147.
- Rymour of Ercildoun, Thomas, 154;
Thomas, his son, 154.
- St. Abbs Head, 49, 157.
- St. Baldred, 76, 142, 199; monastery of, 76, 220.
- St. Baldred's Well, 142.
- Whill, 142.
- St. Cuthbert, 5, 6, 9, 72, 75, 154.
——, church of, Edinburgh, 83.
- , church of, Yester, 83.
- St. Martin, Ada de, 10.
- , Adulph de, 10.
- , Alexander of, 7, 8, 10.
- , church of. See Haddington.
- St. Monance, church of, 59.
- Saltoun, 52.
- Wood, 50.
- Sanctuary. See East Lothian.
- Sandie, Mr. East Linton, 133.
- Sandyford Burn, 186.
- Say, family of, 10.
- Scott of Blair, William, 110.
- , Sir Walter, 92; visits to Gifford and Garvald, 207.
- Scoughall (Scuchale), 6, 9.
- Seacliff, laird of, 201.
- Sedilia, 139, 148.
- Seton (Cf. Winton), George, 1st Lord, 139.
- , 2nd Lord, 139, 222.
- , 3rd Lord, 139.
- , 5th Lord, 139.
- , 8th Lord, 222.
- , Robert, 6th Lord, 138.
- , Sir John, 139.
- , 7, 10; barony of, 139.
- , Castle, 137, 138, 208.
- , Chapel, 83; visit to, 137-140.
- Shags, 125, 157.
- Shirreff, Colonel James, Haddington, 113.
- Siccar Point, 157.
- Sinclair of Gosford, 85; Henry, his brother, 86.
- of Herdmanston, Lady Catherine, 139.
- , Oliver, 200.
- Sleich, P., clerk of the Baxters of Haddington, 21.

- Smith, James, baker, Nungate, 33, 34.
 ———, James, clerk of the Baxters of
 Haddington, 21.
 ———, Robert, burgess of Haddington,
 23.
 Snowie, Mr George, 221.
 Somner of Summerfield, Richard, 30.
 Southwood, 224.
 Soutra Aisle, 76, 77; visit to, 153-155.
 ——— Hill, 78.
 Soutter, Rev. J. T., M.A., 199.
 Sparrow Hawks, 50.
 Speir, Colonel, 63, 69.
 Spott, parish church of, visit to, 144-
 146.
 ———, Canongate of, 144.
 Sprott of Spott, Mrs, 146.
 Squirrels, grey and red, 54.
 Stenton, kirk session of, 144, 145.
 Stevenson, Sir Johnne, 86.
 ———, 90.
 Steylaert, Ardræn, Dutchman, 139.
 Stoats, 52, 53.
 Stone Circles, 152.
 Stow, 75.
 Sun-dial, 149.
 Swan, D. B., The Monastery of North
 Berwick, 55-69.
 Tantallon, lands of, 57, 63.
 ——— Castle, 219; visits to, 212-
 215.
 Tenes, Sero de, 7, 8, 11.
 Teodbold, 6.
 Thirlage, 25, 28, 29, 36.
 Thomson, Alexander, baxter, Nungate,
 20.
 ———, Bernard, in Haddington, 15,
 16.
 Threshing-Mill, inventor of, 142.
 Tineæ of East Lothian, 180-184.
 Todrick, T. W., solicitor, Haddington,
 14n.
 Tortrices of East Lothian, 179, 180.
 Tranent, 139, 208; churchyard of, 209.
 Traprain, 78.
 Tudor, Princess Margaret, at Fast
 Castle, 158.
 Turnbull, William, cordiner, burgess
 of Edinburgh, and Elizabeth,
 his daughter, 106.
 Turner, Sir William, M.D., 206.
 Tweeddale, Charles, 3rd Marquis of,
 196.
 Tweeddale, John, 1st Marquis of, 196.
 ———, Lord, 84, 91.
 Twites, 50.
 Tyne, River, 72, 141, 186; mill on the,
 7, 10; otters in the, 51; St.
 Cuthbert's association with, 8,
 73; Francis Jeffrey nearly
 drowned in, 90.
 Tynningehame, 6, 9, 73; visits to, 220,
 221.
 ———, church of, 201, 220, 221.
 ———, monastery of, 76.
 ———, Muir of, 221.
 ———, parish of, 201.
 ———, sanctuary of, 75, 76.
 Uchtred, son of Gilis, 7.
 Ulf, 6.
 Usher, Frank J., 147, 158.
 Valoniis, Philip de, chamberlain of
 Scotland, 11.
 ———, Roger de, 7, 8, 11.
 Vinget, 6.
 Voles, 53.
 Waddell, Rev. Dr Hatley, 203.
 Wallace, John, exhorter of Cockburns-
 path Church, 148.
 ———, Sir William, at Yester, 194.
 ———, William, architect, 222.
 Wardlaw, Agnes, wife of Alexander
 Barns, 16.
 Watling Street, 154.
 Watson, G. P. H., 212, 215.
 Waxwings, 50.
 Weasels, 52, 54.
 Wedale, sanctuary of, 75, 76.
 Wedderburn of Gosford, Sir John, 141.
 Wells, 189, 226; Holy, 146 (Spott); 154,
 155 (Soutra); 199, 200 (White-
 kirk).
 Wemyss, Francis, 7th Earl of, 139.
 Wemyss and March, Francis, 9th Earl
 of, 140.
 ———, Earl of, 141.
 Westbarns, 29.
 Westminster, sanctuary of, 74, 91.
 White. See Quhyte.
 Whitecastle, 204.
 Whitekirk, parish of, 9.
 ———, parish church of, 221; visit
 to, 199-204.

Whittingehame, 51, 52; visit to Tower and Yew Tree, 132, 133; murder of Darnley plotted at, 132.
 ———, church of, 151; visit to, 133, 134.

———, parish of, 150.
 Wilkie of Gilkerston, James, 30.
 ———, James, of Haddington House, 30.

William the Lion, references to charters by, 10, 11, 55-57, 185.
 ———, warden of the Priory of North Berwick, 59.

Wilson, Mr John, Episcopal Minister at Haddington, 120.

———, John, in Haddington, 16.

Winton, George, 3rd Earl of, 222.

———, George, 5th Earl of, 222, 223.

———, Robert, 1st Earl of, 138.

———, Earl of, (1685), 84.

———, Earls of, 220.

———, House, visit to, 222, 223.

Wishart, George, bishop of Edinburgh, 106.

Wolf's Crag, 158.

Wood of Largo, Sir Andrew, 64.

———, Andrew, 64.

Wood, Alexander, vicar of North Berwick, Kilconquhar and Largo, 64.

Woodcocks, 52.

Woodhead, 224.

Woodpeckers, great spotted, 49, 50; green, 50.

Wright, William, 210.

Yester, John, 2nd Lord, 194, 193; his daughter Marion, 194.

———, John, 4th Lord, 198.

———, Lord, (1685), 84.

———, 51, 52, 53; lands of, 11, 186; parish of, 10.

———, Castle, 185-198, 219; Defoe visits, 91, 185; visit to, 136; date of building, 187, 192; description of, 190; Alexander III and William Wallace at, 194; "heidung hill" of, 198.

———, House, 137.

York Building Company, purchases Winton Estate, 223.

Young, Sir Peter, 115.

———, Robert, King's Printer, 116, 117.